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Vol. XXXI, No. 6

February, 1951

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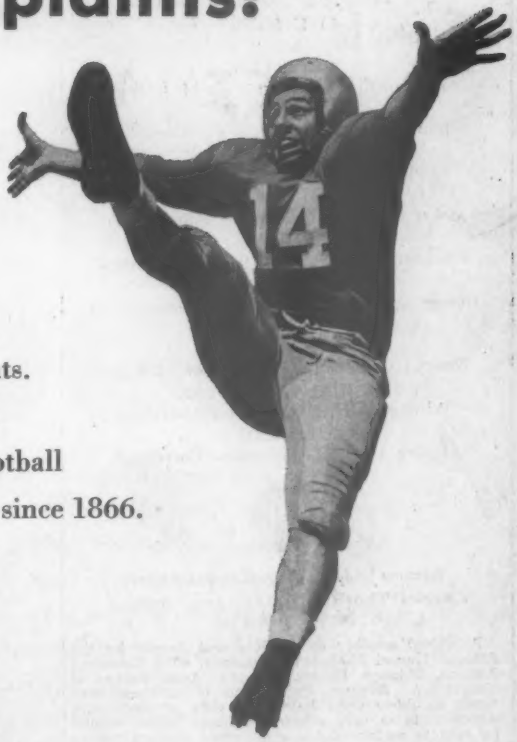

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The ATHLETIC JOURNAL

Nation-Wide Amateur Athletics

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FRONT COVER ILLUSTRATION

FRONT COVER ILLUSTRATION
Jim Holland winning the Western Conference broad jump championship with a leap of 25′ 1½″. For more on Holland see pages 12 and 13.

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from here and there

IN addition to the two brothers, Howie Odell and Bob Odell in coaching, there is a third member of the family in the same profession and that is Don Fleming, backfield coach at Marquette. Don is a brother-in-law of the Odells. Howie, of course, is head coach at Washington, while brother Bob is backfield coach at Wisconsin. . . . Signs of the times — the New York Touchdown Club and A. G. Spalding and Brothers presented $1500 with which to buy athletic equipment for the aircraft carrier, Oriskany. . . . We hear so much about the evils of athletics that when we hear a story like the following we hasten to pass it along. During the NCAA cross country meet at Michigan State, Herb Semper, the great little distance runner from Kansas, was leading Warren Dreutzler by 35 yards, about a half mile from the finish. Herb has the sight of only one eye, as the result of a childhood accident, and at the spot referred to swerved off the course and followed the path made by a snow plow. Dreutzler shouted, "Left, Herb, Left" at which point Semper swung back on the course and won the victory by 25 yards, a victory that would surely have been Warren Dreutzler's who was running over his own course. We would like to nominate Dreutzler for some type of sportsmanship award.

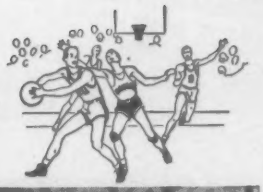
HEARD at the Football Coaches Convention—there are four things the great American public can always do, namely, run a railroad, run a hotel, fight a fire, and coach a football team. . . .What must be some what of a national record was established at the recent Big Seven Basketball Tournament when Froistad of Colorado fouled out of the game in 43 seconds of playing time. . . . "Shocky" Needy, assistant to Bruce Drake at Oklahoma, was asked by the press for his views on the "Sooner" prospects this winter. "Shocky's" reply: "We are preparing a strategic withdrawal to prepared positions, only we don't have the prepared positions.". . . .Howard Cann, veteran N. Y. U. cage mentor, now in his 28th year as head coach, recently watched his N. Y. U. team play their 500th game under his tutelage. . . We are indebted to the Rawlings "Roundup" for this one. Les Steers, world record holder in the high jump, between halves of an Oregon basketball game, without a warm-up, and wearing ordinary gym shoes, jumped seven feet, one-quarter inch, to become the first athlete to jump more than seven feet. . . .In 1917 George Halas, present owner and coach of the Chicago Bears, captained the Illinois basketball team. The following year Burt Ingwersen, current line coach at Illinois, was captain, and in 1920 "Tug" Wilson, Big Ten Commissioner, was captain. Wonder if any other school can point to three as illustrious athletic figures who captained their teams in successive years?

BOWLING Green (Ohio) State University and the College of St. Thomas have recently joined the Central Collegiate Conference. . . .For traditional games and length of time played, we submit the following: Andover and Exeter have played 70 times in a series going back to 1878. Groton and St. Mark's this fall played their 61st game, the first game being played in 1886. Milton Academy and Noble and Greenough just celebrated their golden anniversary game. Among public high schools, Lawrence and Haverhill, both in Massachusetts, met this fall for the 55th time; Everett and Malden, of the same state met for their 51st game. . . .This past fall only six of the 22 New York City high schools which sponsor teams fielded teams. In basketball the situation is worse, with only two of the 59 Public School Athletic League members fielding teams. This is due to the refusal of the High School Coaches Association to carry on extra-curricular duties pending settlement of the salary dispute. . ."Dutch" Meyer holds a unique record in that his coaching association for 28 years has been with but two schools, 27 of them with T. C. U. The Dutchman graduated from T. C. U. in 1922, coached

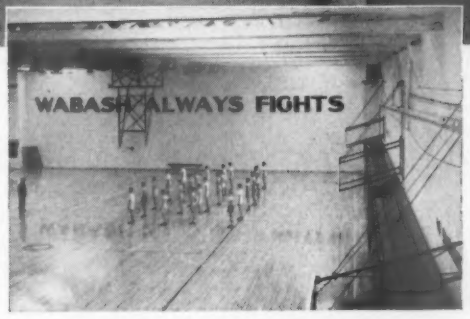
(Continued on page 40)

at leading gyms from coast-to-coast the choice is Porter

Wabash wins with Porter



The main court at Wabash College is equipped with No. 217B "Hoistaway" Forward Fold Basketball Backstops, with No. 211B Plate Glass Rectangular Banks. These backstops can be hoisted to the ceiling.



Practice courts at Wabash have Porter No. 212B Wall-Braced Backstops that extend out over the folding bleachers. These have No. 208B Rectangular Plywood Banks.

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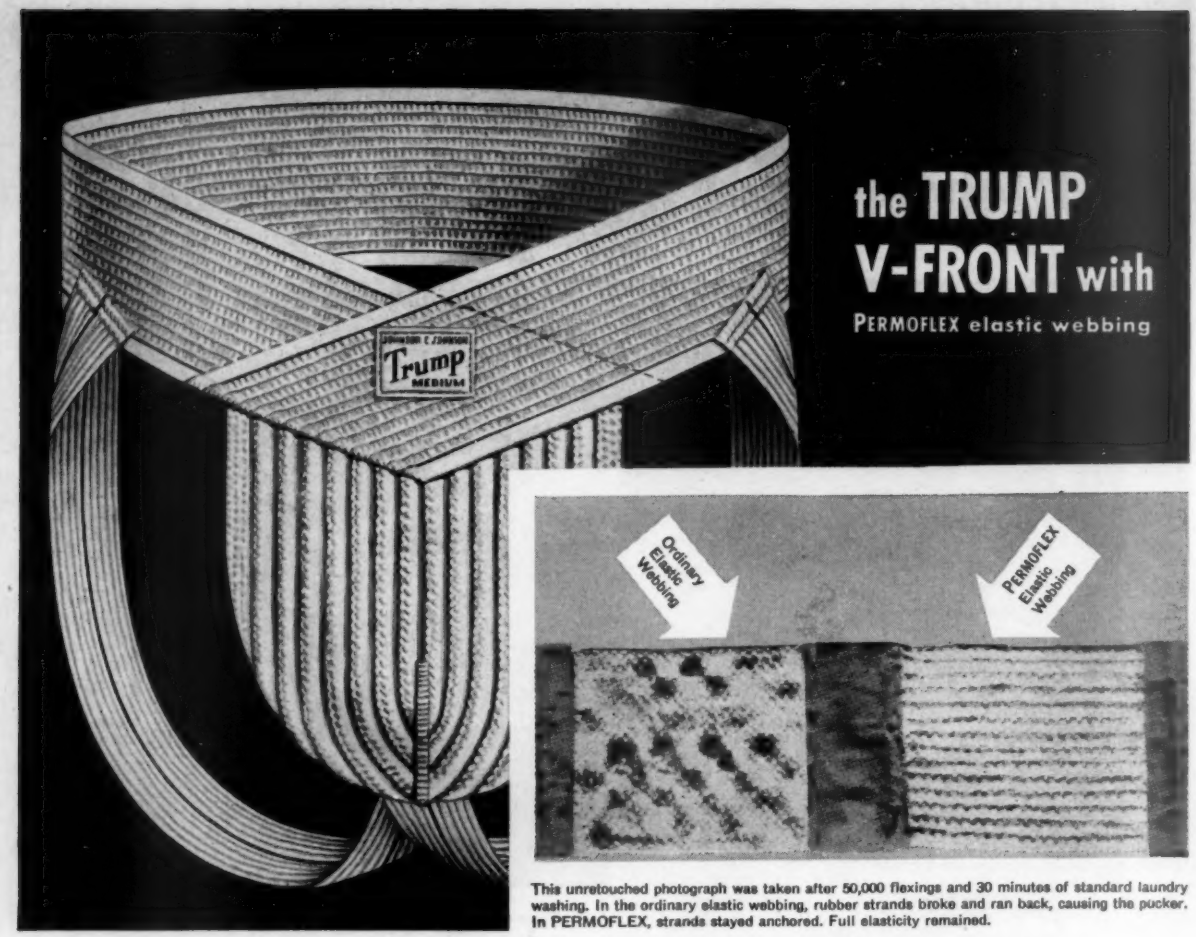

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McEwen—Distance Champion

By DON CANHAM
Track Coach, University of Michigan

THROUGH the years, the University of Michigan has been fortunate in having many outstanding middle distance and distance runners. The most recent, and probably the greatest, is Don Scott McEwen, the present National Collegiate two mile record-holder and champion.

McEwen ran his first competitive race for Michigan in the fall of 1949. In that first race he defeated Don Gehrmann to establish a new Big Ten four mile cross-country record. Since then he has completed a remarkable series of sophomore performances, and these were climaxed when he broke Gregg Rice's national two mile record last June at Minneapolis.

Don McEwen came to Michigan with a 4:28.8 mile to his credit. He had done very little cross-country running but had competed in high school track for two years at Glebe Collegiate Institute in Ottawa, Canada. Don was fortunate in having Robert Campbell for his high school coach, since the boy was brought along slowly and with good judgment. We have the feeling that he was not overworked or exploited beyond what was best for him, at any time.

During his freshman year at Michigan, Don had very little chance to race the clock. The majority of his practice time was spent trying to correct an extreme tendency to understride. He remained out of all competition his freshman year, and ran only two time trials at one mile during the season. Following the fall cross-country season that year, Don worked at off distance pace and speed work under one mile. In June of his freshman year, he appeared to be a more efficient runner. Don's length of stride had increased eight inches, his speed had increased tremendously, and he had learned the meaning of the word *relaxation*.

With this background, we will go into some detail regarding McEwen's training program. It is probably more important to indicate the fundamentals he worked on, rather than his actual day-to-day schedule. A little of both, however, might be of interest to coaches and athletes.

We certainly are in the minority in our attitude toward competitive cross-country running. Our distance men do a great deal of running in the fall, but very little in competition. We feel the average boy cannot run in top flight competition ten months of the year, and be expected to have the enthusiasm and interest necessary for a championship performance in May or June, when it counts. Our attitude might be different if we did not have such a long indoor and outdoor track schedule.

Another principle we have worked on is the mental approach to distance running. It has been our feeling for a long time that it is much easier to get a man physically fit for competition than it is to get him mentally ready. We work constantly along these lines, and have found that emphasis on pride and tradition plays a great part in building this confidence.

It is also our belief that distance runners, in general, perform better, and certainly more consistently, when given an underwork program rather than when given an overwork program. This is particularly true after the competitive season has started. It is rather easy for a boy to become mentally tired of distance running. Constant hard work is a good way to bring this on.

Don McEwen as a twenty-one year old sophomore ran a 4:11.7 mile and a 9:01.9 two mile. He ran six two mile races under 9:10 and six mile races under 4:14. His most remark-

(Continued on page 42)

Frames 1 2, 3, above, and 6 and 7 below, show a low knee action common to distance runners. The knee is coming through just high enough to allow the foot to clear the ground. This minimizes "bounce" and results in a shorter stride, the longer the race. It aids in performance because it conserves the energy required to lift the knee. Frames 3 and 4 above, and 8 and 9 below, show a high kick-up behind on the theory that it is a natural motion for long distance men. This kick-up allows the foot to swing forward in a short pendulum arc which conserves energy, since it does not require a lifting action. Most Europeans run with this high kick-up. The entire series illustrates an arm action that is comfortable for McEwen. The left arm is, no doubt, a little high, but a lower action does not feel right for him. It will be noticed that while he may appear tight in the shoulders, the hands are relaxed and loose. Many arm actions are proper if the boy is relaxed and comfortable. Europeans, in fact, pay almost no attention to the arms in distance running.

Pitching Psychology

By CARL BOYER

Cal Aggies, Davis, California

PITCHING psychology, or the master-minding of hitters, is a weapon that a pitcher may employ in the diagnosis of batting weaknesses. There are several methods a pitcher may use to become a good pitching psychologist and among these are:

1. Careful study and diagnosis of each batter during pre-game batting practice.
2. The use of his catcher's knowledge as well as his own under game conditions.
3. Intelligent use of the first pitch in dominating the hitter.
4. Confusing the batter with a combination of overarm and sidearm deliveries.

In games at the Cal Aggies, we sit with our pitchers and catchers during the opposing team's batting practice and take notes on each hitter. We attempt a diagnosis of each hitter, make a notation next to each name in the line-up, and put our findings to the test during the game. This type of analysis of batting style is very important to our pitchers in enabling them to pitch intelligently to batting weaknesses and strength. For example, if it is very apparent during batting practice that a batter is a long-ball hitter, we try to discover what kind of pitch he hits the farthest. We may discover that it is suicide to throw him a high inside fast ball, or any pitch that is a fast ball. From this factor we plan our pitching strategy to him. In this case we may start the particular hitter with a very high change-of-pace "blooper" ball. Our main idea is to get him off balance and confuse him so he does not know what to expect on the next pitch. We want to upset his thinking pattern so that his physical reaction to the pitch will be slowed up.

In this way we get away from the juvenile idea that the first two pitches should be fast balls, and that the third one is invariably a curve ball. By throwing a high "change up" to the hitter on the first pitch, it is often easy to detect what type of pitch he has been looking for. If he steps into his hitting stride long before the ball arrives at home plate, we are fairly certain that he was looking for the fast ball. If he waits and strides just at the right time, the chances are he has been looking for a curve ball or has picked off our signal for the "change up" pitch. Our catcher, as well as our pitcher, will note and meet the situation accordingly. After this first "blooper" pitch has been thrown, we may give the hitter a fast ball but give it to him where we have decided he does not like it. In this case this hitter likes the high fast ball so we would throw him a low fast ball to get a good strike across the knees or get him to make an easy out. Our next pitch to this hitter would be a slow curve, preferably a dropping one, the strategy here being to get him to look for another low fast ball. After having pitched the hitter a low ball, we may then cross him up by throwing the pitch he likes, right up under his nose. How good we make this pitch, and how good we make all of them, will depend on the ball and strike count at the time.

Sometimes on the first pitch we deliberately throw the hitter a very bad ball to upset his mental balance. The strategy here is to do anything that will be a change from the expected normal delivery. The pitch may be so bad that it might even be behind the hitter. This type of maneuver is very confusing to the hitter because it makes him think that the pitcher has lost control and he might get hit with a bad pitch. He does not know what to expect next.

If the hitter thinks this way, his thinking pattern has been interrupted and the strategy has been successful. The pitcher then has the edge regarding what he chooses to throw next. The batter in that frame of mind may be master-minded from there on, and may be forced to hit the pitch the pitcher wants him to more easily.

Getting the so-called jump on the hitter is very advantageous in the psychology of pitching. If the pitcher can get the first ball pitched in there for a strike, he is in a better position to use his advantage by mixing up his succeeding pitches. A great many hitters believe in taking the first pitch, and there are certain times during a game when it is very evident that the hitter is going to take the first pitch. For example, it may be the eighth inning with the score 14 to 2 in favor of the pitcher's team. The opposing hitter's strategy then is to make the pitcher throw as many balls as possible with the idea of getting a base on balls, or a good ball to hit. When this situation occurs, we instruct our pitchers to come in with a good strike on the first pitch. The strategy here is to get the jump on the hitter by getting the called strike, if he is taking the pitch, and again to make the pitch tempting enough so that he will want to swing at it. If he hits it, that is fine, our chances of getting him out quicker are greater and with a big lead, a base hit will not make that much difference.

One of our pitchers once asked us, "What happens if the hitter hits a home run on that first pitch?" Our answer was, "The score is then 14 to 3, instead of 14 to 2, and you can then go to work on the next batter." It is easily seen that one more run is not going to be of much help to the opposition. The pitch to throw to the hitter with this type of lead, will depend largely upon who the hitter is, and what type of hitter he is. Sometimes it is good psychology to throw the hitter a "nothing ball"; one that has nothing on it and is good and slow and right over the middle of the plate. On this type of pitch the batter has to supply all the power, and if he tries to knock it out of the park, he is usually an easy out. If he takes the pitch for a strike, the pitcher has the jump on him and has upset his mental balance for hitting.

If a batter's train of thought is to be interrupted, it is very necessary that both the pitcher and catcher detect the batter's expectations by his movements and stance at the plate. Our pitchers and catchers are drilled to watch for these telltale signs by being reminded constantly to watch the hitter before and during his time at bat. These things may often be detected on the first ball thrown to the hitter. The direction of the hitting stride, whether it is fast or slow, are among the various tip-offs that will tell the pitcher what may best be

thrown to that hitter. For example, a hitter who will step into the batter's box and swing his bat back and forth vigorously, shows very obviously that he intends knocking the fast ball out of the lot. A slow knuckle ball thrown as a good strike can upset that hitter, throw him off balance, and cause him to pop up or miss the ball completely. It is this type of diagnosis and execution that saves the pitcher's best pitch for the clutch and lengthens his pitching life.

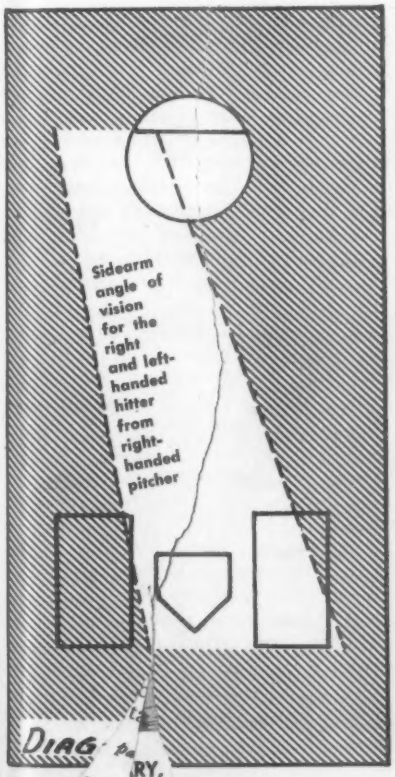
The use of the sidearm pitch in the psychology of pitching is very important if used properly and at the right time. At Cal Aggies we teach a definite but variable series of sequences in the use of the sidearm and overarm deliveries. A great deal of the time these sequences will depend on the first pitch. Our pitchers are told, that in order to make these sequences work, they must get the batter thinking a certain way and keep him that way. For example, in one of our sequences we have our pitcher make his first pitch an overarm fastball, high and inside under the chin. The idea is to get the batter to back up a little, and make him look at an inside pitch that is not good enough for a swing. Since this pitch was an overarm inside fastball and a deliberate waste ball, we put our psychology to work by throwing a *sidearm* straight ball on the next pitch. It is drilled into the pitcher that this pitch must pass over the outside corner of the plate if the desired result is to be expected. This desired result is a called strike, or a swing at the ball, producing a poorly hit ball. Here the batter's subconscious mind goes to work against him. He thinks that since he has looked at an overarm motion, this sidearm pitch will be either right at him or again inside. He figures that by stepping away from the ball, more toward third base, he will avoid being hit with the ball if it is thrown at him, or he will hit an inside pitch. His reaction to this sidearm pitch, stepping more toward third base, or putting his "foot in the bucket" as it is called, is due to the pitcher's movement toward third base in the pitching delivery.

If this sidearm pitch has been called a strike, we then give the hitter an overarm curve ball outside. We want the hitter to swing and miss. We hope he will do so because we have had him looking first, at an overarm pitch that was very inside, second, at a sidearm pitch that he thought was going to be inside because it was sidearm, and third, because the overarm curve ball looked as if it was going to be inside. Now, we come through with a sidearm curve ball that cuts the outside corner. The purpose of this pitch is to make the batter feel that since he has seen the sidearm pitch before he will stay in there and swing at it. However, when he sees the ball coming right at him, he will step away as he starts his swing. He will have played into our hands again because the sidarm curve ball, breaking away from him has caught him off balance, and has given him little chance of hitting the ball. If he does hit it, it will not be hit well. Usually it ends up being either strike three, a weak infield ground ball, or an infield fly.

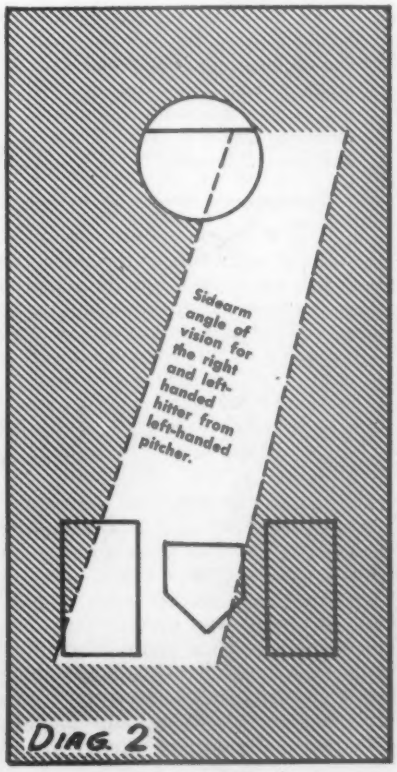
To better understand the psychology in the sidearm sequences it may be best noted by a study of the functional differences between the sidearm and overarm pitches. The overarm pitch is delivered from an overhand delivery, with the pitcher stepping directly toward the plate. The movement of the body here is in one plane; forward. The sidearm delivery is different in several respects. The pitcher's swing of the leg is first toward third base and then in an arc that goes forward, toward home plate and then first base.

This step is caused by the movement of the body in the same direc-

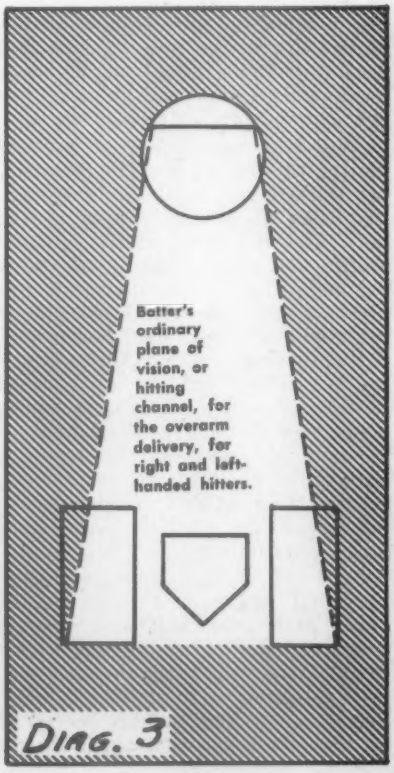
(Continued on page 46)



DIAG. 1



DIAG. 2



DIAG. 3

Preparation for Tournament Play

By RAY EDDY
Basketball Coach, Purdue University

IN preparing a group of boys, ranging in age from fifteen to nineteen years, for a series of tournament games such as we had in Indiana, it is imperative that the coach place himself in a position of genuine authority. We know we have had such authority before, but as the season draws to a close the average coach will relax on important details and this may bring victory or defeat.

In Madison for the past several seasons we started planning for our tournament play three weeks before the start of the sectional. We realized we would have three regularly scheduled games, but for those games we planned nothing special, in other words, we just played them.

As stated before, we started early. Our first step was to discontinue practice during the first week in February. The boys were told to stay away from the gymnasium until game time of that particular week. To many coaches this would be construed as a sure way to lose another ball game. However, when planning our schedule, we attempted to engage a weaker team that particular week. Also, the members of the team were permitted to relax on training rules. We used this as a means of bringing about mental relaxation and in that way we achieved physical relaxation.

With the resumption of practice during the second week in February, we worked very hard on fundamentals such as passing, setting of the feet, and the other drills we used during the season. During this week we intensified our work, ever alert to the fact that from our basic defense we might be called upon to use special weapons on defense. For example, we knew that should we meet certain teams it would be to our advantage to be able to use a modified pressure defense. We spent some time on this type of defense, and at the same time, worked a few offensive maneuvers to use against a similar defense, should one be encountered.

It is well during this period to review and work against a zone defense. Since most coaches have a definite pattern to follow against such a defense there would be no advantage in explaining it in detail. Volumes have been written on this one phase of basketball, yet each coach has his particular method of attacking the zone and we would say — a coach should adhere to his convictions.

On entering the last week of practice before our scheduled games were over, we emphasized the fast break a little more. In fact, we ran more during this particular week than during any other the entire season. Our daily practice started as explained, and we finished each daily session (three practices this particular week) with a forty-five minute scrimmage. Usually we ran our first five boys against the second five for fifteen minutes, and then sent in the best five boys from our second team. After some ten minutes against this team, we started substituting for our original five men, and usually replaced them as we would during a ball game. This was continued for the remainder of our scrimmage period. What works in one case may not fit another program or practice, therefore, it is best for a coach to use his own judgment as to the length of scrimmage periods.

RAY EDDY won the Indiana tournament last spring while at Madison, and shortly after was appointed to fill the basketball vacancy at Purdue University. Ray graduated from Purdue in 1934 where he played on two championship teams, and then started a very successful coaching career at Tell City, moving to Madison in 1939. During his eleven years at Madison his teams have won ten sectionals, five regionals and three semi-finals. Madison was runner-up in 1941 and 1949. His over-all coaching record at Madison shows 239 wins and only 62 losses.

With the conclusion of the regular season's play, we were ready to continue what we had been working for during the past three weeks.

There is a great difference of opinion as to the way to take care of a team during actual tournament play. Some few coaches, who have a budget that will permit, keep their boys together for all meals and lodging. We personally do not approve of this measure; instead, we felt the boys should continue to use their own beds to rest in (at least eight hours per night), and also continue to eat the same type of food they had been accustomed to eating during the year.

Perhaps the largest job the average coach has during this very trying period is to convince each player that the responsibility of being ready to go is his own. In addition to this problem, we must consider John Q. Fan as another obstacle in the path to success. As we all know, Mr. Fan means well, by encouraging the player, but many times his advice is in reverse to that of the coach. We say, here is where a coach's job as a salesman really is put to a very critical test. Sell the boys on the idea that the coach, and only the coach, knows the answer to the outcome of the weeks ahead, and we hope there will be weeks ahead for the team.

Practice periods during the first week of tournament play should be conducted in a manner very similar to the previous weeks of work. Perhaps a little more emphasis on shooting off the floor, and getting rebounds would be a wise move. One drill used to develop follow-up of shooters own shots, is as follows: We had two groups at each end of the floor, and each group was given a ball. Then we shot a game of longs and shorts from various spots on the floor. The variation to the regular game was the shooter must recover the ball off the bank in order to shoot the short shot, and if he was able to move in quickly on a long shot and tip it in the shot counted the same as the long. We permitted the boys to tip as long as possible, with the option that should it be a legitimate tip, it would count two points. It was surprising how one group worked to outscore the opponents, who, in the case, were their own teammates.

After shooting we spent a few minutes on defensive work, concentrating on the weaknesses of our first opponent. From defense we went to offense trying to speed up our passes and at the same time, not lose our timing of cuts and crossing of men. Each day's work was finished with a brief but highly-spirited scrimmage. The above work should take no longer

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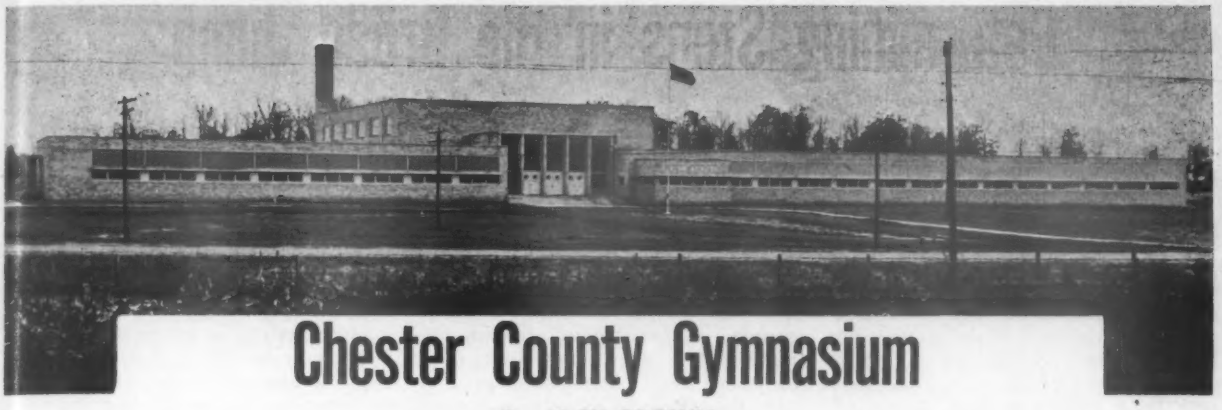

Chester County Gymnasium

By JACK BROWN

Athletic Director, Chester County H. S., Henderson, Tenn.

THE Chester County High School is probably one of the most modern high schools in Tennessee. It is situated at a forty-five degree angle to the highway like a huge T, about a mile outside of Henderson, and it stretches the length of about two city blocks. Any student attending school in a building of this type is fortunate, since it was designed to protect the students' welfare. For instance, all the classrooms are on one floor, thus eliminating the use of stairs.

The gymnasium is designed with the latest innovations and conveniences, and these details make it one of the finest in this section of the country, probably the finest.

Cost of the Building and Type of Construction

The building, located on an eleven-acre plot, is estimated to have cost $420,000. Construction was started on October 6, 1949 and completed on November 8, 1950. The structure, covering 43,000 square feet, is made of concrete blocks, brick veneer, concrete floor (covered), a steel roof decking, and metal sash. The concrete floor is laid over with 32,000 square feet of asphalt tile.

Going into the construction of the building were 165 tons of steel and 40 tons of reinforcing steel. One thousand one hundred cubic yards of concrete were used and 654,511 concrete blocks. In addition to this, 243,434 buff bricks, 67,000 slag bricks and 54,293 common bricks went into the building. Four hundred thirty squares of roofing were used. In excavating, 1400 cubic yards of dirt were removed.

Architect: Woolwine & Harwood
Contractor: Gardner Construction Co.
Sub-Contractor: Johnson Lumber Co.
Bleachers: Fred Medart Manufacturing Co.
Flooring: Chapman & Dewey Lumber Co.
Floor Finish: A. C. Horn Co.

The Gymnasium

Not entirely unique, but novel in this section of the country, is the position of the gymnasium, which is a part of the academic building. This is something of an innovation from the old style of having the gymnasium apart from the administrative part of the school. There are many reasons for this, one being the fact that it is more easily and safely reached in inclement weather.

Two corridors serve as passages to the gymnasium. These hallways stretch from the rear of the building down either side of the gymnasium to the front corridor. These two corridors lie perpendicular to the front corridor.

The floor of the gymnasium is laid on first grade beech and is permanent. From floor to ceiling the gymnasium is twenty-two feet high. The floor is square, being 90 feet by 90 feet, and the playing floor itself is 82 feet by 48 feet.

The backstops are made of steel and there are six goals, that may be

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Determining Steps in the Broad Jump

By CHARLES E. BEAUDRY
Track Consultant, St. Louis University

THE broad jump, together with the hurdles and the sprint relay, constitutes an event which has occasioned considerable uneasiness and anxiety on the part of the competitor and the coach. Unlike the mile run or the putting of the shot, characterized by a relatively high degree of consistency and regularity, the broad jump inherently comprehends a certain variance and unpredictability.

The problematic outcome of the "long jump" is due primarily to the natural difficulty of terminating a driving sprint with a vigorous leap from a joist eight inches in width, placed approximately one hundred and twenty feet down the runway. It is to be recalled that the competitor must take off from or behind the scratch line, all measurements being made from the front edge of the aforementioned board.

While it is true that the inability to hit the take-off board is more of a problem in high school than in college, the fact remains that many experienced athletes have had the misfortune of "fouling-out" in this intricate event. Score sheets from dual meets, national championships and even the Olympic Games bear convincing testimony as to the difficulty of accurately determining steps in the broad jump.

Factors such as wind, temperature, circumstances of the runway and physical condition alter considerably any given technique or formula for accurately predetermining the steps. Nevertheless, we should like to submit a plan for working out an approach which has been proven to be highly successful in indoor competition and which also, even under adverse conditions, may be modified for outdoor jumping. It is sincerely believed that the adoption of this method will save coaches hours of valuable time and avoid the tedium of employing the time-honored but inaccurate system of trial and error.

Our method is predicated on the Greek rule of thumb that the human foot is approximately one-sixth of the length of the body. As a runner's stride is more or less proportionate to his height, it follows that the stride is proportionate to the length of the foot. In fact, in the last eight steps approaching the take-off board, this ratio has been found to be 7.65. Instead of multiplying this co-efficient by the length of the track shoe, times eight, to form the first check point, it is suggested that the competitor measure off from the inside edge of the scratch board twenty-eight and one-half shoe lengths to form his final check mark, then another twenty-nine and one-half to locate the first guide mark. This is done

Holland Broad Jumping

By
FRANK HILL
Track Coach, Northwestern University.

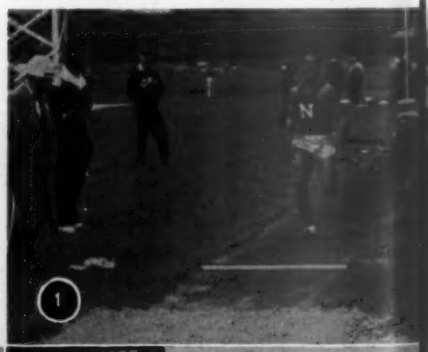
ILLUSTRATION 1 shows the end of the approach run. Note Holland's muscular relaxation and "gather" while he is going at top speed. Holland has both speed and muscular power as shown by the following: 100 yard dash, 9.9 seconds; high jump, 6′1″, shot put, 45′; broad jump, 25′9″; 440 yard dash, 48.4 seconds.

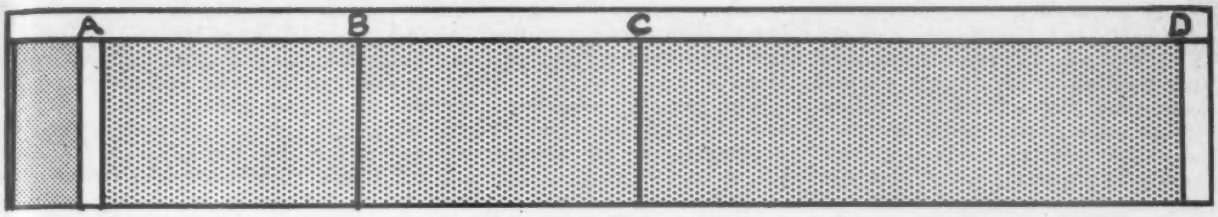
Illustration 2 shows the take-off stride. Note the use of the arms in all the pictures of this sequence. In this picture Holland is squatting into the "rocking chair" position. His foot is about to hit the take-off board. His chin is thrown up and back to help in the upward lift of the body.

In Illustration 3 the body has been straightened by the impact of the jumping foot on the board and the lift of the arms. Jim has started on a particularly fine example of a take-off "rise." Notice that all of his power and weight seem to be exactly above the jumping foot and leg at the optimum moment.

In Illustration 4 the jumping leg is relaxed and trailing as Holland prepares to bring it forward in a hitch kick motion. Both are ahead of the body at this point.

In Illustration 5 the arms swing down and back to aid in the arch of





by placing the heel of one shoe as closely as possible to the toe of the other in a continuous straight line. This principle is graphically illustrated in the above diagram. Reading from left to right, *A* represents the take-off board, *B* the final check mark, *C* the preliminary guide mark and *D* the beginning of the run. It will be observed that distance *AB* is approximately 4 per cent shorter than *BC*, allowing for the natural tendency to shorten the jump stride.

Thus, an athlete jumping from his right foot will begin his run at point *D* approaching point *C* at 7/8 to 15/16 speed, striking line *C* with his right foot. Then, to afford maximum acceleration at the joist, he drives four steps at optimum speed meeting point or line *B* with the right foot, followed by four more vigorous steps, the last of which will terminate with a leap off the board *A* with the right foot. Should the competitor spring from the left foot, the procedure remains the same except that all check points are hit with the left foot. Guide points should not be laid out to be struck with alternate feet, as this complicates unduly the procedure and increases the possibility of error. Beginning point *D* is determined by placing the jumping foot on line *C*, back towards the pit, and striding past the end of the runway at 7/8 to 15/16 speed. This point will be established at a mark made by the jumping foot, approximately one hundred and twenty feet from the take-off board.

Mention should be made that this arbitrary figure of twenty-eight and one-half plus twenty-nine and one-half shoe lengths has been determined by taking the average of one hundred high school and college broad jumpers of different ages and heights over a period of ten years. Individual differences being what they are, it is to be expected that an athlete will adapt this average figure to his individual needs. In most cases the adjustment should not exceed 2 per cent. It is suggested that the broad jumper be asked to follow the directions of this plan and then make the slight personal adjustment required. Three preliminary jumps should prove adequate in order to make this individual correction. Following this shoe plan, the competitor will be able to dispense with carrying along a measuring tape.

Outdoor jumping, with varying degrees of temperature, wind and changing conditions of the runway, calls for the exercise of judgment and experience. If the runway is slow, temperature cold and head-wind present, both points *B* and *C* are proportionately moved toward point *A*. Warm weather, a fast track or a tail-wind, on the contrary, will necessitate

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the back which is so necessary to a good hitch kick.

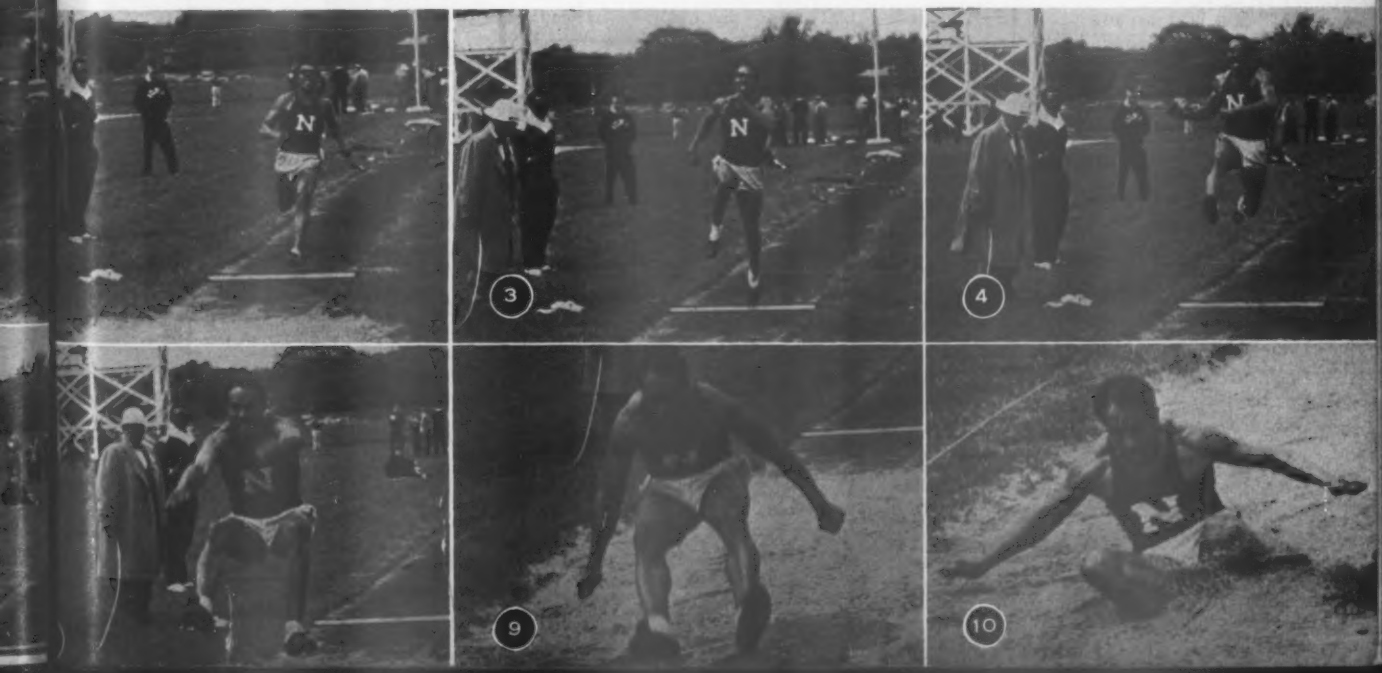
Illustration 6 shows how the arms swing back at shoulder height as the first stride in the air is completed.

In Illustration 7 the arms are shot forward to bring the body above the legs. Jim is now "sitting in the bucket."

In Illustration 8 the forward thrust of the arms continues. The feet are starting to drop toward the pit. Note the fine balance.

In Illustration 9 Holland kicks his feet up with a flicking motion as he reaches for maximum distance. His fine balance seems to be endangered by a body twist to the left.

Illustration 10 shows that slight imbalance has caused Holland to land in a sitting position in the pit before he has a chance to complete the final thrust of his arms which would have put his weight over his feet and carried his hips and torso forward and beyond the feet, thereby adding much distance to an already good jump of 25′1½″.



Physical Education Today

By PAUL V. KEEN
Chairman Intramural Department, Univ. of Oklahoma

AN increased consciousness of the value of a healthy body during a time of war, has again emphasized the need of a health and physical education program for our nation. There was a general belief that there would be a better national physical education program after World War II. This belief came partly from wishful thinking and partly because history proves, that all the great improvements in physical education and health education have closely followed some war.

At the outbreak of World War II, doctors of the Selective Service System in their examination of draft registrants, not only discovered a large number of corrective and preventable disorders, but they found that an alarming number of the young men they examined were soft, flabby, pampered and needed a corrective program. There were 4,000,000 4F's in the United States, and 2,500,000 of them — or more than one-half — could have been acceptable had such a corrective program been available. We cannot blame the individual for this startling deficiency. A number of times these deficiencies are due to ignorance. It is the nation's responsibility to teach its young men to take care of their bodies.

Some of our military leaders believe that a national physical education program should be geared to fit military purposes, and in a program of this type physical fitness and a series of conditioning exercises should be stressed. The more discerning physical education leaders believe that our physical training should be a part of the whole educational program.

In peace-time education, we have a vital role in teaching the whole child so that he may function better in the service of a democratic society. In doing this, we teach him to live, and in case of another war he may be adjusted easily for military purposes.

In order to have a program that will assure us far-reaching success, all school children, both elementary and high school, should be assured an equal opportunity to receive instruction and to participate in all organized activities that make for a healthy body.

The physical education program should start in pre-school or even in pre-natal care. The summer round-up, or country program of requiring all pre-school children to have a medical check-up, with the idea of asking their parents to have all remedial defects corrected before school opens, has been a big contribution to the health of our nation.

Every school should have a full-time health nurse. Her preventive work will aid community health and start our children on the road to healthy living. A school health clinic, including examinations by a physician and a follow-up with the parents, is needed. It should include a systematic plan for immunization and vaccination, according to local community needs. A hot lunch program sponsored by the school is also essential for the diet of the children.

The high school and college physical education programs vary in each section, state, or community in the United States, and are often neglected shamefully. These programs should include a thorough medical examination, and then a follow-up with the instructor on each individual case.

Students should be classified A, B, C, and D as to health. The physical education department should include a corrective and preventive program to care for special cases.

All physical training programs should include adequate space for indoor and outdoor activities, such as dressing rooms, storage space for individual equipment, showers and towels.

All students should be required to change clothes for physical training classes and then take a shower when the classes are over. Every boy should be given a physical achievement test. This test should include tests in arm and leg strength, agility and endurance. The army and navy have both devised good achievement tests. The army test includes these seven individual tests: push-ups, squat jumps, squat thrust, pull-ups, sit-ups, 100-yard pick-a-back, and a 300-yard shuttle run. After this test, the boys should be classified into A, B, C, and D groups. In addition to this test, all boys should be given a swimming test, and taught to swim. The minimum swimming requirement should include a 100-yard free-style swim, and the ability to stay afloat five minutes.

Most of those students with A and B ratings on their medical examinations and their physical efficiency tests will be able to get a great deal of physical activity in inter-school athletics and intramural competition. Those who are not able to swim should be required to take special swimming instruction until they pass the swimming efficiency test.

After World War II, there was a big increase in the number of boys participating in inter-school athletics, and they had better supervision, better equipment, and better care. All boys are required to pass a medical examination, and in case of injury, will be given first aid treatment. In cases of more than a minor injury, the boys will be given the best medical care and will not be allowed to participate until it is absolutely safe

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PAUL KEEN has had a long career at the University of Oklahoma, having first reported there in 1927. Until 1938 Keen coached wrestling at the Sooner school, winning national honors once and being runner-up twice. He also served as president of the Collegiate Wrestling Coaches Association. Keen now devotes his full time to his duties as Chairman of the Intramural Department. With the international situation what it is, we feel that Mr. Keen's views will prove highly informative. Incidentally, Paul Keen is the mayor or the city of Norman.

Officiating Mechanics Recommended for Fencing

By MAXWELL R. GARRET
Fencing Coach, Univ. of Illinois

OPINIONS expressed not only by the average spectator, but by the fencers as well are that there are noticeable differences in fencing officiating. These differences have caused fencers to adjust their actions more to tournament officiating than to the actions of their opponents, and have, in a large measure, been due to the elasticity provided within the rules. Then too, no attempt has been made to school and examine officials, nor has there been any *organized* attempt made to evaluate or improve the officiating.

It is the contention of the writer that even under the present rules fencing may be made to move faster for the benefit of the contestants and the spectators. This may be accomplished by cutting the "rephrasing" where the director analyzes *only those last movements* which bear directly upon the hit scored, and the judges use only gesticulation and monosyllables in reply.

Assuming that the spectators *are* interested in the director's analysis of the plan, then one of the greatest handicaps in fencing today is the inability of the audience, where there are over 100 spectators present for the meet, to hear the rephrasing given by the director. However, if the analysis may be accomplished by standardized and approved hand signals, such as in basketball and football, then everyone present at the competition, will understand what the results were during any specific action.

However, before going into this analysis further, the functions of the jury must first be clearly understood. The director is the *only one* who may decide the "validity" of a touch (whether or not a touch should be awarded). The judges may determine only the "materiality" of a touch (whether or not there has been a touch made upon the fencer). Here, the director, too, may voice an opinion regarding the "materiality" of a touch.

Officiating Mechanics

1. Directors and judges should halt action *only* when a touch arrives on the valid or invalid target. "Flat" touches, grazes, etc. are not recognized as touches and should not stop the action of the fencers.

2. The director should be in full control of the conduct of the bout and he, alone, should officially award touches and determine all questions on discipline arising under the rules.

3. Infighting should be permitted but where such action resolves itself into corps-a-corps, i.e., where there is body contact or where the guard of one weapon meets the ball of the opposing weapon and such meeting is held, then the director should call a halt and break the clinch.

4. Regarding any action, the judges when questioned, should use the following hand signals and verbal statements:
a) *Raising one arm vertically over his head,* fingers extended, indicates a touch has landed on a valid target. Verbally he will respond by saying, "Yes" (Illustration J-1).
b) *Raising a clenched fist over his head* indicates a touch has landed foul or on an invalid target. Verbally he will say, "Foul touch" (Illustration J-2).
c) *Crossing and uncrossing his arms before him* indicates that no touch has arrived. Verbally he will reply, "No" (Illustration J-3).
d) *Raising his arms sideways with elbows bent* indicates that he abstains, or has no opinion, or is in doubt. Verbally he will say, "Abstain" (Illustration J-4).

5. The director must be brief in polling his jury and therefore should ask the following simple questions: a. Initial attack? b. Counter attack? c. Next counter attack? d. Time thrust? e. Renewal of attack? (remise, replacement, etc.). f. First jab on break of clinch? g. Second jab on break of clinch?

6. In summarizing the jury's decision, the director should use the following hand signals and verbal statements:
a) *Raising one arm vertically over his head fingers extended* indicates a good hit has landed on a valid target before any other touch (Illustration D-3A). In awarding the touch he *bends his arm raising one finger* and indicates by pointing the finger at the opponent who has scored the point (Illustrations D-3B and D-3C).

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MAC GARRET captained the City College fencing team in 1938 and '39, and following his graduation coached at Townsend Harris High School in New York. In 1940 he came to Illinois and in 1942 he brought the Illini a conference championship. Following four years with the air force he returned to Illinois. In 1946-1947 his team missed the championship by half a point, the following year his team was runner-up by one point and the next year was runner-up by two points. Mac is very active in the National Fencing Coaches Association.

A Brief for Tumbling and Apparatus Work

By OTTO E. RYSER
Gymnastic Coach, Indiana University

WHY is tumbling and apparatus work not included in many public school physical education programs? "It is too expensive!" says the administrator. Before the last word is out of his mouth the educator chimes in with "It is too formal." Echoing these words comes, "It is too dangerous" from the lips of the parents. And then, in a soft, meek voice we hear, "I don't know how to teach it" from the teacher.

It appears that these four reasons are the main objections to the inclusion of this worth-while activity in many physical education programs throughout the country. A *requirement* or *recommendation* for this type of work may be found in the majority of state and city courses of study for physical education. Tumbling and apparatus work are recommended in William R. LaPorte's *The Physical Education Curriculum*. All this is fine; but when one examines the actual programs in operation the lack of tumbling instruction is very noticeable.

Now, let us examine a little more closely the answers that were given to this question. On the surface they seem to be reasonable and tend to cause a teacher to say, "Well, I guess I'll have to omit it from my program."

First, the statement, "It is too expensive." This presents a very real problem. It must be admitted that apparatus and mats do cost a considerable sum of money. However, the initial cost is practically the only cost. Given proper care, this equipment will last indefinitely with little additional cost in upkeep. A school may spread its buying over a number of years, acquiring one or two pieces at a time. A well-equipped gymnasium will soon result.

Suppose for the present the purchase of even a very meager amount of equipment is out of the question. Are we stopped now? No, for an enterprising and interested teacher may improvise sufficiently to get a program under way. In suitable weather the soft turf may serve as a mat. For indoor work old mattresses may be requisitioned, thoroughly cleaned, recovered with a piece of canvas or even a sheet and put to use. It may be possible to acquire a number of blankets and quilts which, when piled one on top of another, make a serviceable mat substitute for a number of the simpler stunts. No mat or other equipment is required for many of the simple stunts.

When contemplating the expense of apparatus, do not overlook the possibilities of homemade equipment. The construction of an outdoor horizontal bar is a comparatively simple matter. Sink two four-by-four posts in a hole and secure with cement, drill a 1¼ inch hole through each post and run a 1⅛ inch steel bar through these holes. A peg through the post and bar will keep the bar from turning. Parallel bars, especially low ones, may be made in school shops. They may serve as a *project* for the shop as well as be a valuable addition to the physical education classes. A vaulting box, to serve as a substitute for a side and long horse, could be constructed in the school shop also. Exhibitions or shows may be put on to raise money for needed equipment.

So much for the answer to the administrator who is worried about the high cost of the program. Now, we will answer the charge about the formality of the program. An activity, in and of itself, is neither formal nor informal. It is the method used in presenting or teaching the activity that makes it either one or the other. The author once attended a physical education clinic where demonstrations of tumbling techniques and methods of teaching volleyball skills were presented. The following comment by one of the spectators was overheard as the tumbling number was being presented: "We have outgrown that formalized type of program now. Why do they continue to include such old fashioned work in these clinics?" A little later, the volleyball lesson, which consisted of twenty girls lined up in four rows of five, all going through the *motions* of serving a volleyball at the command of the instructor, brought no disparging remarks from the up-to-date individual who was so contemptuous of the formality of the tumbling program. Probably, since volleyball is a *game*, it was assumed that the activity had to be informal. We should cease to talk of *formal* activities and use the term *formal methods* in its place.

Apparatus activity should be taught more informally than was the custom when the class method of instruction was so much in vogue. By using the squad method, and even on occasion the free play method, this work may be made quite informal and very enjoyable.

However, there is no good reason why this phase of the physical education program should not be of a formal or at least semi-formal nature. Some of the nationally accepted objectives of physical education may best be achieved through the use of more or less formal methods. It is not being suggested that the formal supplant the informal method, or even that the formal method receive an equal share of the time. Undoubtedly the informal methods have many proven values that have added much to the contributions made by physical education to the education of the *whole* child. In a well-rounded program, however, there must be a variety of activities and a variety of methods used in presenting them. Some of these may very well be formal.

Another factor connected with apparatus and tumbling activities is the problem of *safety*. Tumbling and apparatus work may be dangerous. Instead of discarding a worth-while activity from the program, why not attempt to revise the methods of instruction and *make it safe?*

With proper instruction and adequate supervision this type of work may be made no more hazardous than most other types of worth-while physical education activities. Definite progression of stunts from simple to difficult makes for greater safety. If fundamentals are well learned, the more advanced stunts will not be as difficult or dangerous. Trained spot-

(Continued on page 54)

OTTO RYSER graduated from Normal College in Indianapolis and then coached basketball at Orange Twp. High School for the school year 1940-41. Ryser was appointed as an instructor in physical education at Indiana in 1942, and in 1948 was made gymnastic coach.

A Track Meet Clinic

By RICHARD A. LARKIN
Track Coach, Upper Arlington High School
Columbus, Ohio

OHIO track coaches have worked harder to promote their sport than any other coaches we know about. This work has been done through the very strong Ohio Track Coaches Association. District track clinics are one of the methods employed. Upper Arlington has staged the Central Ohio District clinic for the past three years with outstanding success. Consequently we asked Richard Larkin, the track coach, to tell our readers about the clinic they hold. Larkin is a past vice president of the coaches association, founder of the Upper Arlington Relays, and a highly successful track coach, having coached two state championship teams.

AMONG the services of the Ohio State Track Coaches Association to its members, is the sponsoring of state and regional track clinics. The clinic held at Ohio State University is generally the first one of the current season. District clinics follow, and are under the supervision of the college or high school directors who are on the association board. These clinics are held within a short space of time. Since they are serving a long-felt need, they continue to grow in popularity.

Programs at these clinics vary in subject matter. A study of the acceptable forms to be used in executing the standard events is the heart of the clinic program. This is usually covered by a lecture or a combination lecture and demonstration. The only constructive criticism heard has been that too few events are included in the program. If this is true, the result is the postponing of the instructional period for many coaches, and may be a valid criticism.

The program of the clinic held at Upper Arlington High School for the past three years does not solve all the problems. It has, however, been presented with the idea that all the standard events will be covered as completely as possible in a single session. Furthermore, it attempts to interest track team members, since it presents a program in which they are the competitors.

The needs of this clinic are not beyond the equipment and conditions found in any area that supports a balanced athletic program. An average-sized basketball court with a minimum seating capacity will provide sufficient space. The program is built around the standard events of a track meet. All events have been included except the discus throw which was omitted because it was a hazard. Experimentation with a paper-molded discus having enough weight to give balance to the thrower, may allow that event to be included this year. Floor mats give ample protection for the high jump, broad jump, shot put, and pole vault. A vaulting box for the latter event, although elevated from the floor, is safe and usable. Cross bars in the jumping events are kept at a low height.

The clinic developed here is therefore a modified track meet held indoors. Measurable factors and ultimate objectives center around the form used in executing the several events. Speed, distance, and height are not the desired ends. In this respect the clinic is somewhat a copy of the ancient Greek meets which placed emphasis on the beauty of execution.

All announcement details are incorporated on a single mimeographed sheet. The date, hour, number of entries allowed each school, time schedule, and equipment follow the usual pattern of a program sent by the manager of a relay or a district meet. A printed return postal card, that provides sufficient space for listing entries to the clinic, is enclosed. Schools in the district are limited to five entries. These entries may be distributed over the field but each is limited to a single event. Schools with fewer than five entries occasionally ask to place a boy in more than one event. This is not encouraged. In limiting the number of entries, the program as finally arranged, is found to include only the most accomplished athletes. This is desirable because numbers between five and ten provide enough examples in a particular event for the study being made. The field is actually increased above this number because the boys are frequently asked to repeat a performance. The final program lists the events horizontally on a single page, and the names of the schools entering boys are arranged vertically. Entries are then placed in the blocks made by ruling off the page.

Program arrangement is governed by the equipment being used. Thus, as a safety measure and to conserve time, the pole vault, high jump, and broad jump are the first events held. This is insurance against hastily placed mats that might result in turned ankles. Progressing in this manner and moving equipment off the floor rather than on, the dashes and distance running are the final events.

College and university track coaches are invited to grade the entries on form. We have been fortunate in finding men who are regarded as experts in all of the track events. Grading is accomplished with flash cards similar to those used at swimming meets. Numbers from one to ten provide a numerical range wide enough to avoid conflicting scores. Clerks total the scores and the winners are announced quickly. Five place winners are selected and ribbons are awarded. Team and school totals are not tallied.

Immediately following the completion of an event the judges, taking turns, comment on the performance, pointing out those parts of the action they feel may be emulated, and those points which need correction. Performances are of the level seen daily by the coaches at their respective schools. In other words, the clinic becomes a workshop where the problems are presented by the members of the team and experts are available to suggest ways to improve and overcome the difficulties. This is a high point of the clinic.

The time allotted the events varies. According to the program, fifteen minutes are set aside for a single event and the time consumed usually falls within the limitation. To those familiar with the lecture method, fifteen minutes may seem inadequate. Considering the fact that all the points a lecturer would wish to cover have been presented by a participant, the critics' period becomes a summary and requires little time.

Different events are not run simultaneously and the entries take turns in each event. The spikes are removed from the starting blocks and thus they may be used indoors very successfully.

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The Television Ban

HAVING just returned from the NCAA and Football Coaches conventions in Dallas, we present here a brief report of the action taken by the NCAA in regard to the telecasting of athletic events, and particularly football games. A year ago at the New York meetings, a television committee was appointed to study the effect of television on attendance. Tom Hamilton was appointed chairman of the committee, and consequently at Dallas led the discussion on the matter. May we say at this time that the committee is deserving of real praise for the manner in which it handled the question and presented arguments pro and con. The committee appointed a fact-finding board, the National Opinion Research Center by name. The study was financed jointly by the NCAA and the television industry and proved to be very thoroughly done and highly interesting. Representatives from three television networks and a manufacturer of television sets presented some well thought-out arguments and then Tom Hamilton read the report of his committee with its recommendations. The recommendations called for a moratorium on live telecasts and further experimentation with films, theater television, and phonevision. The next day, before the general meeting, the vote was called on the recommendations of the committee as discussed the day before at the television panel. The vote was an overwhelming 161 to 7. We do not think anybody at the convention was surprised at the way the vote went, but the preponderance of yes votes was somewhat surprising.

What does the ban mean? In the first place, the NCAA does not have the power to enforce the ban, and we would not be surprised to see some schools go ahead and televise their games. We do feel that not too many schools will televise because of the understandable ill feeling which such an action would cause among other schools.

The real problem with the television ban as we see it, is what happens when a state legislature passes a bill which requires a state institution to televise its games. This is a fact which we noted first in our May 1949 editorial, and it is quoted further along in this editorial. Should such a bill be introduced and successfully passed by a state legislature, it would present a real problem for the private colleges, teachers colleges and high schools of the state within the TV area.

The whole television problem is one that we have been very interested in and have followed closely. Three years ago this month we advocated in this column that, "television is too young and as yet not widely enough adopted to ascertain whether it will aid or hurt attendance. Television should be given a fair trial."

Our own experience with television and the comments of our friends led us to believe that attendance would be hurt if televising of games became a general practice. The experience of Newark and Jersey City in the International League in competing with televised baseball games of the New York City major league clubs led us to fear for the smaller colleges and high schools. In this column in May 1949 we said:

"If conditions indicate that a ban will be necessary it should be put into effect by the 1950 season. At the rapid rate which television sets are being produced it is imperative that the ban, if needed, be put into effect before television becomes a habit with the American people. Even then, some of the major state institutions may find public opinion strongly against any such ban.

"Any ban, if it is to work, must be nation-wide. Obviously if a television chain signs an agreement with a major institution whereby it agrees to pay for all empty seats in the stadium and then televises the game locally hundreds of miles away to the detriment of other institutions' attendance, nothing but hard feelings will result.

"It may be that television will prove to be the boon to attendance that radio was—the next year should tell. If it is clearly proven that television hurts attendance, we of the Athletic Journal stand ready to fight for a television ban of school and college athletic contests."

In September 1949 we discussed Mr. Thomas E. Corbett's new book, "New Directions for Television." Among other points we said, "What Mr. Corbett fails to mention and what worries us most

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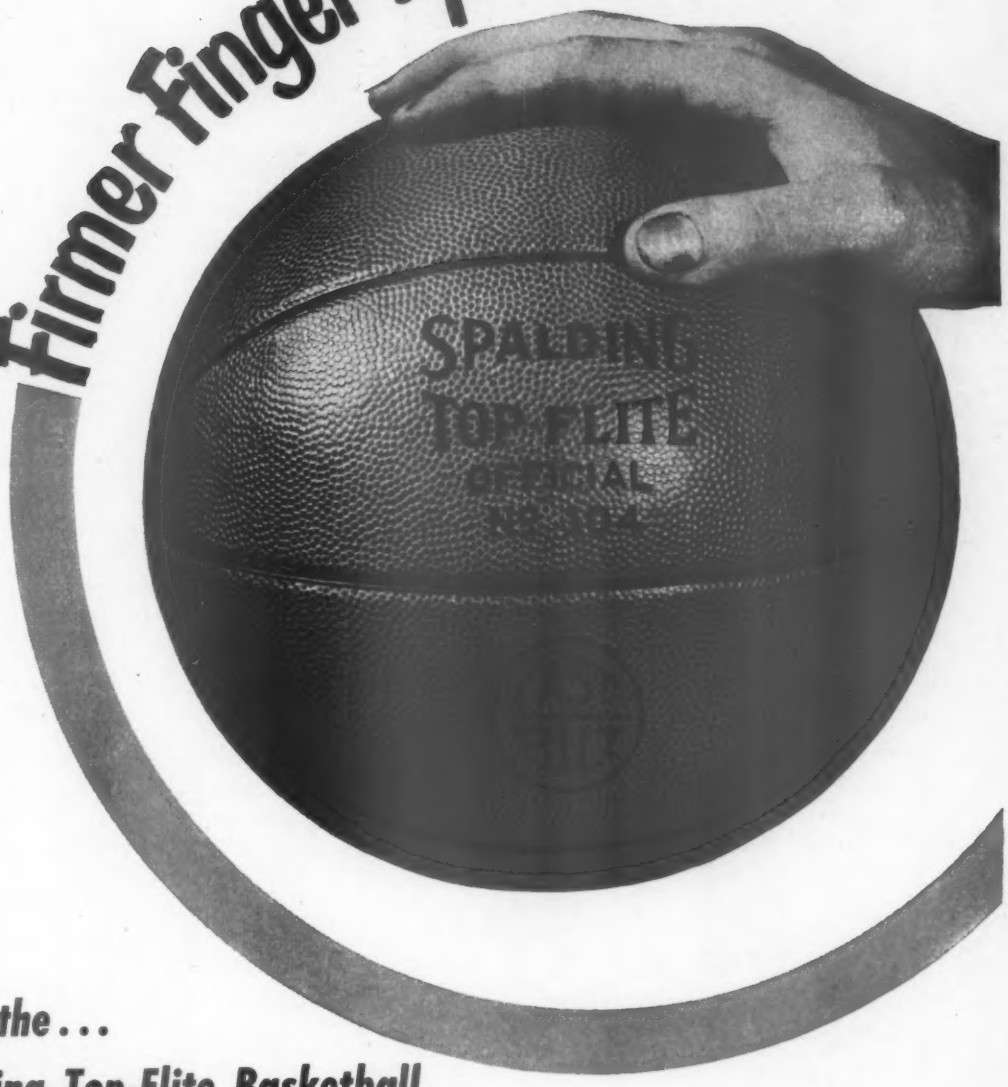

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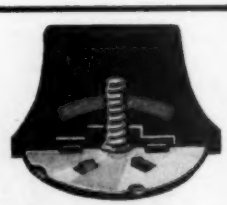

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No Guts?

By ELAM R. HILL

Athletic Director
Edison, H. S., Fresno, Cal.

"GUTS? That boy has "guts" to burn, he'd run head-on into a freight train. At 155 pounds he's the best tackle in the league. Every man on the line outweighs him. Look at that big guard there, weighs 220 pounds — big enough to hunt bears with a switch — but he can't play football. Just doesn't have it, no guts!"

The above conversation, heard on the football field one day, and hundreds of others similar to it, set us to wondering just what all of this talk we hear about "guts" and "no guts" amounts to.

Is it true many athletes, especially football players, deserve the infamous label "no guts?" If so, what is the explanation for it?

Let us examine the slang expressions "guts" and "no guts" for a moment. The word "guts" has come to mean stamina or grit. However, when used in reference to an athlete, it means even more than this. It means a person who possesses the qualities of physical courage to a high degree, emotional control under pressure, and the ability to perform well under extremely adverse conditions.

On the other hand, when we term a boy as having "no guts" we mean he is a physical coward, and generally imply also that he would be a poor risk in a tight game because his emotional control is lacking.

To label a boy as possessing the qualities of "no guts" is a most severe indictment against him. We have struck a death blow to his very character and moral fiber. Every athlete fervently hopes never to be caught dead in this classification.

To be called "gutty," on the other hand, is a compliment of the highest order, implying that the possessor of this prized quality has all of the characteristics of a "real he man." We may rest assured that every boy will strive to be included in this classification.

The thing that occurs to us at this point is why so many boys fail to make the "gutty" classification, especially since they are all striving so desperately to be included in this group.

An easy answer to the problem is to say "they just don't have it" and drop it there. If we all had a wealth of material this approach might work out satisfactorily. Most of us, however, are too short on material, and find we have to work with this group we term the "no guts" type in order to field a team. If we are going to have to work with them, it would seem to be to our advantage to find out what makes them behave as they do.

To reduce the problem to its raw elements and to facilitate explanation let us take the green sophomore who has just turned out for football for the first time, and try to feel some of the things he might feel. If we are going to understand the behavior and reactions of this fifteen-year-old sophomore in a football situation, we will not learn a great deal if we start our study from the first day he reports for the team and work forward from this point.

IT may seem strange to see a subject such as this one. However, we feel that the word "guts" is no longer a slang expression but is as common to athletic parlance as two-on-two. Elam Hill graduated from Fresno State where he lettered for four years in basketball and three in track. Hill is now in his fifth year at Edison High School where he serves as athletic director and basketball coach. His heavyweight and lightweight basketball teams have never lost a game on their home floor. These two teams have won 54 of 60 league games in the past four years.

We must remember that here is an individual, and as an individual, he has had his own background of experiences — tens of thousands of them — and each one has rendered him minutely more able, or minutely less able, to make the present adjustment to this football situation that is now confronting him.

Is it not true that, basically, physical courage and emotional control, for any given situation, are determined by the sum total of former experiences related to them, and how these experiences have affected the individual from the time of his birth until the present time?

We know that this young, green, football prospect was born with certain fears — fear of falling and fear of loud noises to mention only two. We know also that as he grew into childhood he developed more fears, the severity and number of which depended on his individual experiences and how they affected him personally. Two boys may have identical experiences as they mature; one will be weakened by them due to earlier unfavorable experiences; while the other will grow stronger because of his more favorable earlier experiences. On this point rests the understanding of the problem of physical and emotional courage.

With these thoughts in mind, let us examine further our fifteen-year-old sophomore reporting for football practice the first time. How will he react? Does he demonstrate that he has "guts?" Is he a physical coward, deathly afraid of bodily contact, or has he experienced enough earlier favorable situations to allow him to meet the present situation and adjust to it? This is the type of question we should ask ourselves regarding these boys, rather than saying to ourselves: "Here is a boy who demonstrates 'no guts' so I may forget him."

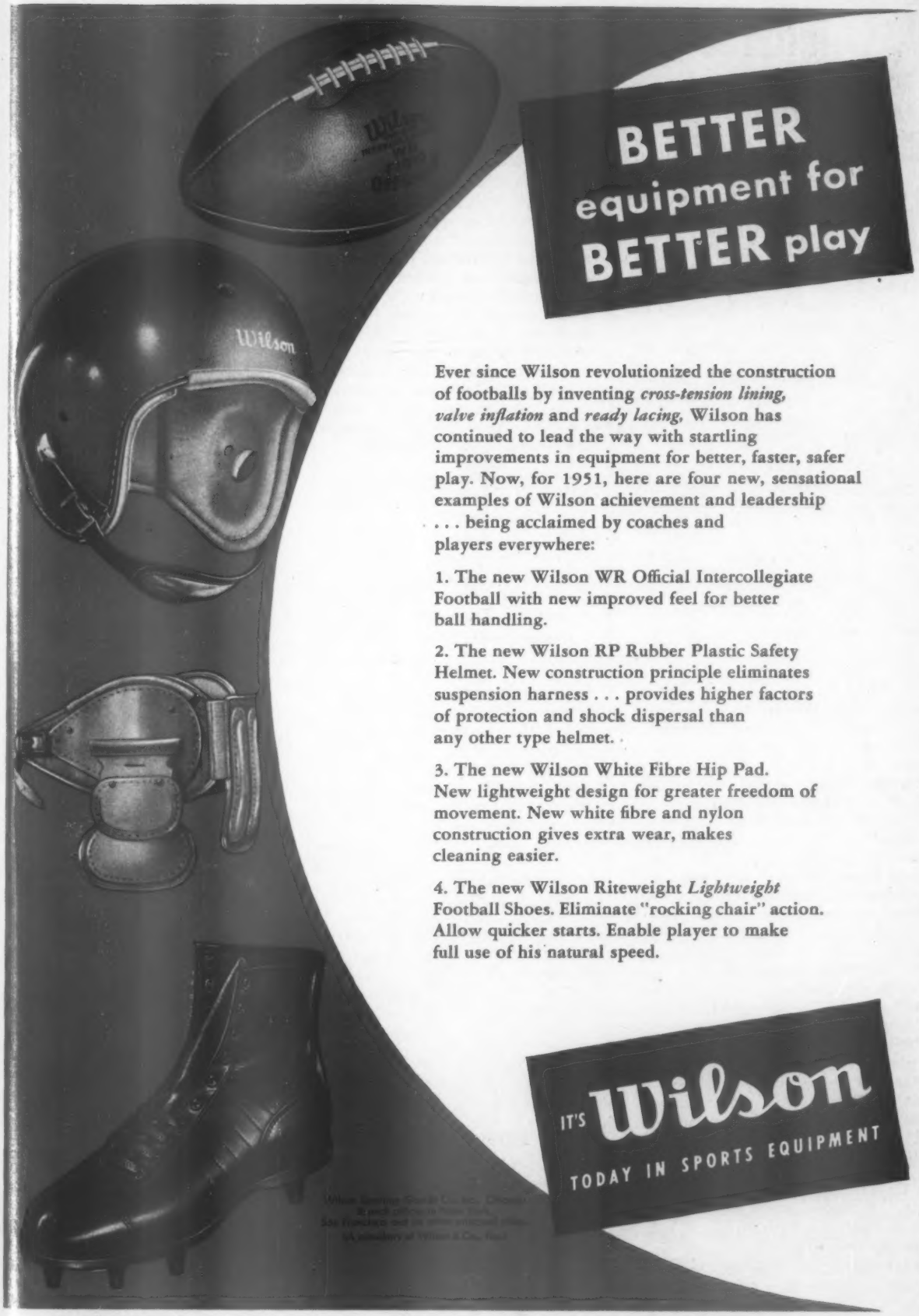
Then we hear the question, "What may I, as a coach, do to help this boy gain confidence and control over these fears so that he may be of some use to me?" The first thing, of course, is to understand that the above processes of adjustment are at work in every boy who turns out for football. No football player was born "gutty." No! Everyone learned and was conditioned to act in this manner.

The job, then, is one of conditioning the individual out of his exaggerated fears; first, through exercising patience and understanding, and we do not mean coddling.

Next, we must offer him enough football experiences — severe enough to challenge him, but never so brutal as to break his spirit, and gradually this green, scared sophomore will begin to gain control of his fears of bodily injury, and obtain the necessary emotional control to help us out in a real game.

To say a boy has "no guts" not only does him an injustice, but it tends to close the coach's mind to the real issue. Many a coach has passed up a potential star with this type of thinking, and, incidentally, failed miserably in the other phase of his job as a coach — namely, humane treatment of the individual.

(Continued on page 50)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Interscholastic Football in Junior Highs

By MALCOLM WALKER
Coach, Kingsville, Texas, High School

CONSIDERATION of the advisability of interscholastic football in junior high schools, at the present time, would seem academic in the state of Texas.

Although the American Association for Health, Physical Education, and Recreation has repeatedly gone on record as being opposed to participation by junior high school boys in competitive football, they are at present re-examining the problem. A recent study of junior high schools in Texas reveals that at least 80 per cent of the schools, with the exception of those in Conference B having small enrollments, are now competing in football on an interscholastic basis.

The following table summarizes the results of this study and shows the extent of participation in Texas:

Classes of Schools	Total Number of Schools in Texas	Schools Competing		Schools Reporting	
		Number	Per Cent	Number	Per Cent
City Conference	41	27	65.8	36	87.8
Conference AA	102	73	71.5	94	92.1
Conference A	226	81	35.8	162	71.7
Totals	369	181	49.1	292	79.1

The City Conference schools include only the large cities of Texas; Dallas, Fort Worth, Houston, and San Antonio. Conference AA includes those junior high schools where the senior high school enrollment is 500 or over. Schools with a senior high school enrollment between 200 and 500 are in Conference A. Conference B schools, with an enrollment of less than 200 were not studied. The number of schools listed as competing was determined by a check of the schedules of the schools actually reporting.

At this time it would seem pertinent to investigate the reality of current criticisms against the program. Objections based on the inherent factors in football at this age level seem to have less basis than do objections relative to the poor administration of the activity.

One of the primary criticisms is that the younger, less mature adolescent boy, age 12-15, is more susceptible to injury than the older boy, age 16-18, and for that reason football is more hazardous in the junior high school. However, the survey of Texas schools, including over 9000 participants, revealed an injury incidence of only 5 per cent in junior high school football as compared with a figure of 10 per cent for high school football. The high school statistics were compiled by the Texas Interscholastic League. Other studies indicate still higher injury rates for high schools. Although competition in the junior high school is not comparable to competition in high school, since the length of the season, length of practice, number of games, and length of games are all modified at the lower level, it would seem safe to question the theory that football is **more** hazardous for younger boys.

THERE is a growing trend toward more and more competition among junior high schools on an interschool basis. Malcolm Walker recently completed a thesis on the status of interscholastic football for junior high school students in Texas. This article is a summary of his findings. Walker graduated from Southwest Texas State College in 1943 and during the war served as athletic officer of the First U. S. Infantry Division in Europe. After receiving his master's degree from the University of Texas, he joined the coaching staff at Kingsville.

There is perhaps a very simple and obvious explanation which has been overlooked by leading educators. Boys who weigh less and have less speed, on coming into contact with other boys of near equal size and speed are subject to less shock on contact than are boys of greater maturity, having greater weight and speed. This would seem true despite the more delicate construction of the younger boy.

Observation of an elementary school program of competitive football under well-modified conditions, involving over 360 participants, ages 10-13, over a three-year period, failed to reveal one single injury.

Before any further broad assumptions are made regarding football injuries in the junior high school, it would be well to investigate the factual basis for such assumptions.

The study of football in the Texas junior high schools gave some credence to the theory that fractures are more prevalent than sprains at the younger age, 13-14, but that the reverse is true at an older age, 15-16. However, no age relationship could be drawn for injuries as a whole, for junior high school football.

Other inherent features of junior high school football, listed by physical educators as reasons for their objections, concerned such factors as organic injury, adverse emotional disturbances, and unwholesome attitudes. No evidence was developed supporting these complaints, but neither could they be contradicted. Evidence of organic injury to normal boys resulting from competitive football is yet to be specifically pointed out. There will probably always be an argument concerning the value of competitive football in developing emotional maturity and socially desirable attitudes as opposed to a villainous role in creating psychic stress and a warped outlook in the adolescent.

Effort might better be directed at suggesting appropriate administration and modification of a program of interscholastic football at the junior high school level, since competition and football are deeply imbedded American traditions which cannot be very easily disregarded and cast aside. Failure to recognize the existence of these traditions and their reflections in the junior high school program may lead only to possible misconduct of the activity rather than to its elimination.

The survey of junior high school football in Texas indicated a lack of uniformity and showed the pressing need for standards. Contrary to the opinion of some educators, organized leagues, involving championship honors, played a stronger role in controlling, modifying, and equalizing competition in a wholesome manner, than they did in intensifying competition.

Where competition was not well organized, the danger of inequality of competition entered the picture, since age limits and other factors were not controlled uniformly. A great deal needs to be done in Texas toward equalizing competition. Not enough schools with large enrollments provided for two squads with separate schedules, thus failing to provide for the wide range in sizes and abilities existing at the junior high school level. Only in isolated instances (the San Antonio schools were a notable exception) did schools apply a stand-

(Continued on page 42)

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Coaching at First and Third

By JAMES SMILGOFF
Baseball Coach, Taft High School, Chicago

COACHING baserunners in baseball is a separate occupation in itself. Good coaches on the base lines are hard to obtain. Big league managers select them carefully, with a thought toward aggressiveness, sound judgment, and daring courage. Base line coaches may win or lose games just as often as players.

In high school and college baseball some of the players themselves are the base line coaches. Those selected are usually veterans, since they have more experience and a greater knowledge of the game. Thus, they are apt to make fewer mistakes, and be more helpful to the team.

High school and college coaches would be wise to select certain players to do the coaching. These players should have the qualifications necessary to make smart ball players. They must be good students of the game, and should be like the quarterback in football. They should have such a love for the game that they do not care to sit on the bench, but want to get into the coaching box whenever possible whether they are actually playing in the game or not.

After selecting a few boys who best qualify for the job of base line coaching, the team coach should then decide who would be suited better at first base, and who should be at third. The latter should be the better qualified, experienced, and courageous of the selectees. The entire squad should be notified that these boys are the base line coaches. Before each game when line-ups are announced, the team coach should also announce the names of the first and third base coaches.

After selecting the base line coaches early in the season there should be an organized signal system between these coaches and the players. The team coach must explain each signal, when it will be given, where it will be given in the coaches' box, how it will be given, and what each signal means. He should explain further that just as players are coached in the fundamentals of the game, so will the coaches be coached on proper strategy and base line coaching methods.

When discussing mistakes and good plays after a game, the team coach should always include decisions made by the base line coaches. They are players who are playing a highly specialized position and should be treated accordingly.

The following signal system has been used by the writer. It is simple, and has been successful with high school players. This system was copied from major league baseball and modified for amateur play.

First base coaches are urged to coach the batter as soon as he becomes a baserunner, that is, as soon as he drops his bat and starts toward first base. In case of a base on balls we want our first base coach to watch the ball and tell the runner who has it as he approaches first. On a batted ball to the infield, the first base coach should encourage the runner to exert his utmost speed by telling him he can beat the throw to first if he really turns on a burst of speed. This keeps the runner hustling. On a base hit the first base coach tells the runner to round out while approaching first. The coach yells "go for two" if he thinks it wise. He must cup his hands alongside his mouth whenever yelling any instructions to baserunners. His instructions *must* be heard above the din and roar of the crowd.

With a runner on first base only, the first base coach should face that runner with hands cupped, and watch the pitcher out of the corner of his eye (Illustration 1). The second the pitcher makes any move to throw the ball to first base for a pick-off the coach should yell loudly and often "back" "back." With runners on first and second, first and third, or with three runners on the bases, the first base coach should turn toward the first baseman who will be playing deep in his position (Illustration 2). This is necessary to guard against the first baseman who might slip in behind the runner on the pitch and try to pick him off first on a throw from the catcher. In this situation the first base coach should not pay too much attention to the batter.

The first base coach may be very helpful to a baserunner on first from a mental standpoint. He should al-

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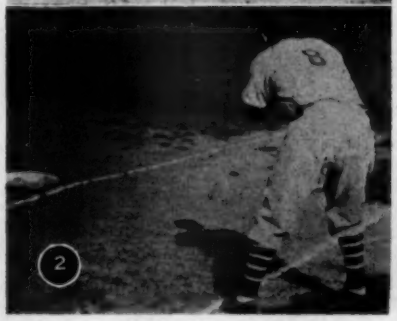

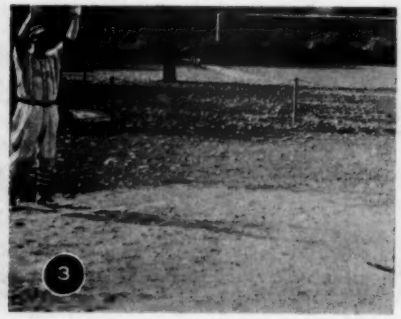

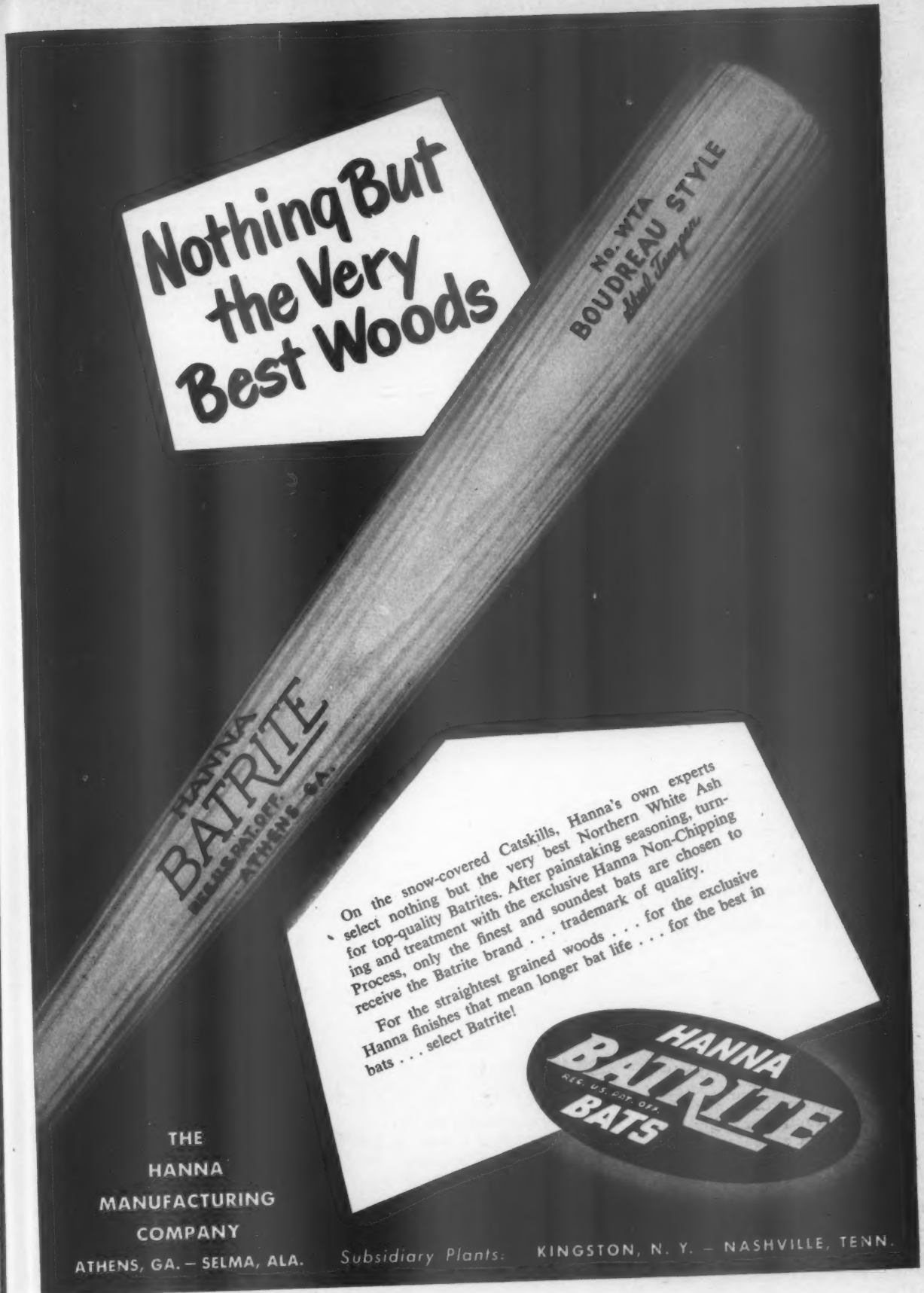
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The Science and Practice of Warming-up

By RICHARD I. MILLER
Instructor in Physical Education, University of Illinois

WARMING-UP is a common phenomenon. Speakers warm-up to an audience; race horses warm-up before a race; automobile drivers warm-up the motor on a cold morning; and ballet dancers warm-up before a performance.

Athletic warming-up is traceable to Ancient Greece, some 2600 years ago. There is reason to believe that the athletic-minded Greeks practiced warming-up procedures that would be acceptable now.

In this era coaches and trainers pay lip service to warming-up but neglect the application. This statement is not a reflection on those who teach thorough and thoughtful warming-up. Since coaches and trainers are sincerely interested in helping athletes reach their potentials, it is believed that neglect of warming-up is due primarily to lack of information. This belief resulted in the following report.

Experimental Evidence Pertaining to Warming-Up

Asmussen and Boje investigated the effects of various types of warming-up upon capacity for work. For the sprint tests (956 Kg/m of work on the bicycle ergometer) and for the endurance tests (9,860 Kg/m of work on the bicycle ergometer), the methods of warming-up are ranked according to their effectiveness in terms of increased work capacity.

Sprint Tests

hot shower bath — 6.10%
preliminary work — 5.88%
short wave diathermy — 5.52%
massage — 6.6%

Endurance Tests

short wave diathermy — 5.77%
preliminary work — 4.00%
massage — 1.81%

Simonson, Teslenko, and Gorkin conducted experiments on seven subjects (four men and three women) to determine the effect of preliminary exercise upon performance in the 100-meter race. The preliminary exercises consisted of a two-minute run at medium speed, various stretching and speed exercises, and several starts. The warming-up routine took from twelve to fourteen minutes. For control tests the subjects rested twenty or thirty minutes in a lying position. After preliminary warming-up, the running time for the 100 meters was 6.62 per cent faster than the running time after control tests. However, the results of this investigation have been questioned because the control tests consisted of resting in a lying position. There is reason to believe that supine resting before an activity will decrease work capacity; hence the 6.62 per cent mean improvement for warming-up may be too great.

Schmid studied the effects of warming-up upon work output. Sixteen subjects (eight men and eight women) were used in three activities: riding the bicycle ergometer, running the 100 meters, and swimming 50 meters. The six types of warming-up used were: setting-up exercises, massage, diathermy, hot bath, shower with hot and cold water alternating, and injection of Pyrifer. (Pyrifer causes an abnormal rise in body temperature). Schmid found that both these active and passive methods of warming-up were helpful. Contrary to Asmussen and Boje, Schmid found that massage had a beneficial effect upon the ensuing activity. Concerning the effects of warming-up upon work output, Schmid concluded: "The favorable influence of warming-up on performance is emphasized. Warming-up may be active or passive. By active warming-up we understand a setting-up exercise, the most effective of which is that employing the motions involved in the actual performance. The different methods of passive warming-up resulted in an improved output for the sixteen subjects. For sport practice, we recommend a shower followed by massage, and mainly, a proper form of setting-up exercise."

Hale compared the effects of preliminary exercise and massage on time for running 440 yards. The first series included three types of warming-up; preliminary exercises, 10 minutes; massage, 10 minutes; and a psychological control method of light digital stroking, 5 minutes. This series of experiments was conducted outdoors in the spring time. The second series included light digital stroking and no warm-up. According to Hale: "The experiments do not show a statistically significant difference between the average times found after preliminary exercise, general massage, light digital stroking, and the times obtained without any warming-up."

Under the guidance of Dr. Peter V. Karpovich of Springfield College, a series of experiments on warming-up have been completed, and additional experiments are in progress. At this point, the results of his investigations have not been released.

Robinson and Heron conducted two series of experiments on tapping exercises. In each experiment the subjects tapped at a rapid pace for five minutes; rested for varying intervals ranging from 0 seconds rest to 1200 seconds rest; then tapped another five minutes. The number of taps completed during each five-minute period was the basis for comparison. These experiments indicate that the warming-up effect in tapping depends upon the relative continuity of the effort. Robinson and Heron state that if the work is too continuous, very little rest between efforts, the fatigue effect is maximally favored and the warming-up effect is concealed. On the other hand, if the work is too discontinuous, too long a rest period between efforts, the warming-up effect is lost. For athletic warming-up there is an optimum length of rest between warming-up and the all-out effort. This length of the rest period varies with the athlete, the weather, and the event.

Studies by Asmussen and Boje; Simonson, Teslenko, and Gorkin; Schmid; and Robinson and Heron find that preliminary warming-up has a beneficial effect upon the ensuing activity. On the other hand, Hale and Karpovich question the significance of warming-up as an aid to better performance.

All laboratory studies in the physiology of warming-up have difficulty in controlling or accounting for

RICHARD I. MILLER graduated from the University of Nebraska in 1947 and received his master's the following year at Springfield College. His best track performance was in the pole vault—he placed third in the 1946 NCAA championships. He also won the pole vault four times in Big Seven Conference competition. He has coached track in Nebraska high schools and is currently working one a book on track and field athletics.

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spurious factors. The difficulty in simulating the competitive situation may produce different results from those found in practice. However, since the practical situation defies objective evaluation, the laboratory is important as a means of objectively evaluating warming-up.

Does the overload principle of warming-up have value? Common examples of this principle are: baseball players swinging two or three bats, golfers swinging two clubs, and shot putters throwing a heavy shot. The results of experiments conducted by Bischke and Morehouse do not support the overload principle of warming-up. They found that use of the 16-pound shot decreased the best throws for the 12-pound shot, and the use of the 12-pound shot decreased the best throws for the 16-pound shot. Best distances were recorded when the putters warm-up with a shot of the same weight as that which they will use in competition.

At the present time the practice of warming-up is spotty. With additional evidence and more written material by coaches, warming-up will more nearly assume its rightful place in athletic training.

Opinions on Warming-Up from Champion Performers

This questionnaire attempts to find the similarities and differences in warming-up procedures of champion track and field performers. A note of caution is sounded regarding their opinions and procedures. One man's delight may be another man's poison. In other words, these opinions indicate what individual champions do and believe about warming-up, and do not necessarily indicate the right method or amount of warming-up for the average collegiate performer, nor set a pattern for the high school participant. The final adjustment in the amount and type of warming-up must take into consideration the individual athlete and his day-to-day variations, the event or events, and the weather.

The distance runners' desire for cool weather probably stems from the belief that it helps conserve energy. Since Scandinavian runners often record championship marks in chilly weather, perhaps it is a contributing factor.

Approximately 65 per cent of the best marks were recorded in strong competition. This finding is in accord with generally accepted opinion that competition brings forth the performer's maximum efforts. Since some of the best marks were posted when the competition was poor, perhaps competition can also have an adverse effect on performance.

Eighteen per cent of the best marks were posted in cool weather. A majority of the athletes who made their best marks on cool days had strong competition, so it would seem that strong competition influences performance to a greater degree than

(Continued on page 34)

Name	Age	Height	Wt.	School	Best Event and Mark	Year	(1) Weather	(2) Competition	(3) Preferred Weather
Patton, M.	24	6-0	147	U.S.C.	100 yds. 9.3 220 yds. 20.2	1950	warm	not too strong	warm
Cox, T.	20	6-0	170	Rice	440 yds. 46.9	1950	hot (87°)	average	800-900F.—dry air
Littler, G.	24	5-8	155	Nebraska	440 yds. 46.9	1941	warm	yes, N.C.A.A.	warm
Rhoden, G.	23	6-2	163	Morgan State	400 meters 45.8	1950	average	no	warm
Barten, H.	21	5-10	137	Michigan	880 yds. 1:50.4	1949	warm	yes, N.C.A.A.	cool
Bowers, P.	23	5-10	145	Kansas	880 yds. 1:51.2	1949	warm	yes, N.C.A.A.	warm
Gehrmann, D.	22	5-9 ½	131	Wisconsin	880 yds. 1:50.7 mile 4:09.3	1950	average	880 (yes), mile (no)	about 70° to 80°
Pruitt, B.	25	5-11	160	U.S.C.	880 yds. 1:50.9	1949	warm	very strong	moderately warm
Dodds, G.	30	5-8	154½		1 mile 4:05.3	1948	average (indoors)	yes	75°—80°F.
Karnes, R.	24	5-10½	145	Kansas	1 mile 4:10.9	1950	average	very strong	average
McGuire, B.	23	5-10	140	Missouri	1 mile 4:10.7	1950	average	very strong	mod. cool and damp
Wilt, F.	29	5-8	145		1 mile 4:09.3	1950	average	very strong	about 60° F.
Ashenfelter, H.	27	5-10	144	Penn State	2 mile 8:59.0	1950	cool (indoors)	very strong	moderately cool
Black, B.	26	5-10¾	120	R.I. State	5 mile 25:00.4	1948	cool	moderate	chilly to average
Attlesey, D.	21	6-4	177	U.S.C.	high hurdles 13.5	1950	hot	no	hot
Fleming, B.	22	6-1 ½	178	Notre Dame	high hurdles 13.9	1950	average	very strong	warm
Morris, J.	24	6-1	165		high hurdles 14.3	1933	warm	yes	hot
Dixon, C.	23	6-2	160	U.C.L.A.	high hurdles 13.8 low hurdles 22.5	1949	average	H.H.(yes)L.H.(no)	warm
Smith, H.	25	5-10	176	Mich. State	low hurdles 22.9	1949	average	yes	warm
McGrew, V.	18	6-2 ½	165	Rice	high jump 6-8¼	1948	warm	Olympic tryouts	hot
Laz, D.	20	6-2	180	Illinois	pole vault 14-6	1950	average (indoors)	yes	weather no obstacle
Richards, R.	24	5-10	165		pole vault 14-11⅛	1950	warm	no	warm
Warmerdam, C.	27	6-0	168		pole vault 15-7¾	1942	average	yes	average
Chandler, O.	22	6-2 ½	230	Stanford	shot put 57-4½	1950	average	no	70°F.
Fonville, C.	20	6-2	194	Michigan	shot put 58⅜	1948	warm	good	78°—80°F.
Fuchs, J.	22	6-2	210	Yale	shot put 58-10⅝	1950	average	no	no special type
Lampert, S.	20	6-4	230	N.Y.U.	shot put 56-6⅜	1949	hot	very strong	hot
Thompson, W.	27	6-½	194	U.S.C.	shot put 56-2	1948	cool	yes	warm
Fitch, R.	27	6-2	220		discus 180-2¾	1946	cool	yes	warm
Frank, V.	22	6-0	195	Yale	discus 177-11	1949	warm	fairly so	warm
Held, F.	22	6-1	168	Stanford	javelin 233-4½	1950	warm	no	warm and dry
Pickarts, D.	22	6-3 ½	180	Santa Barbara	javelin 227-4½	1950	cool	yes	hot days, no wind
Roylance, R.	24	5-7	153	Utah State	javelin 223-6	1950	cool to chilly	none	warm

An identification of the athletes answering this questionnaire. All these performers were champions in their respective specialties.

Each athlete was asked the following three questions:

(1) At the time of your best mark, the weather was hot (90° F.), warm (80° F.), average (70° F.), cool (60° F.), chilly (or - 50° F.).

(2) Was the competition strong on the day of your best performance?

(3) Generally in what kind of weather do you perform best?

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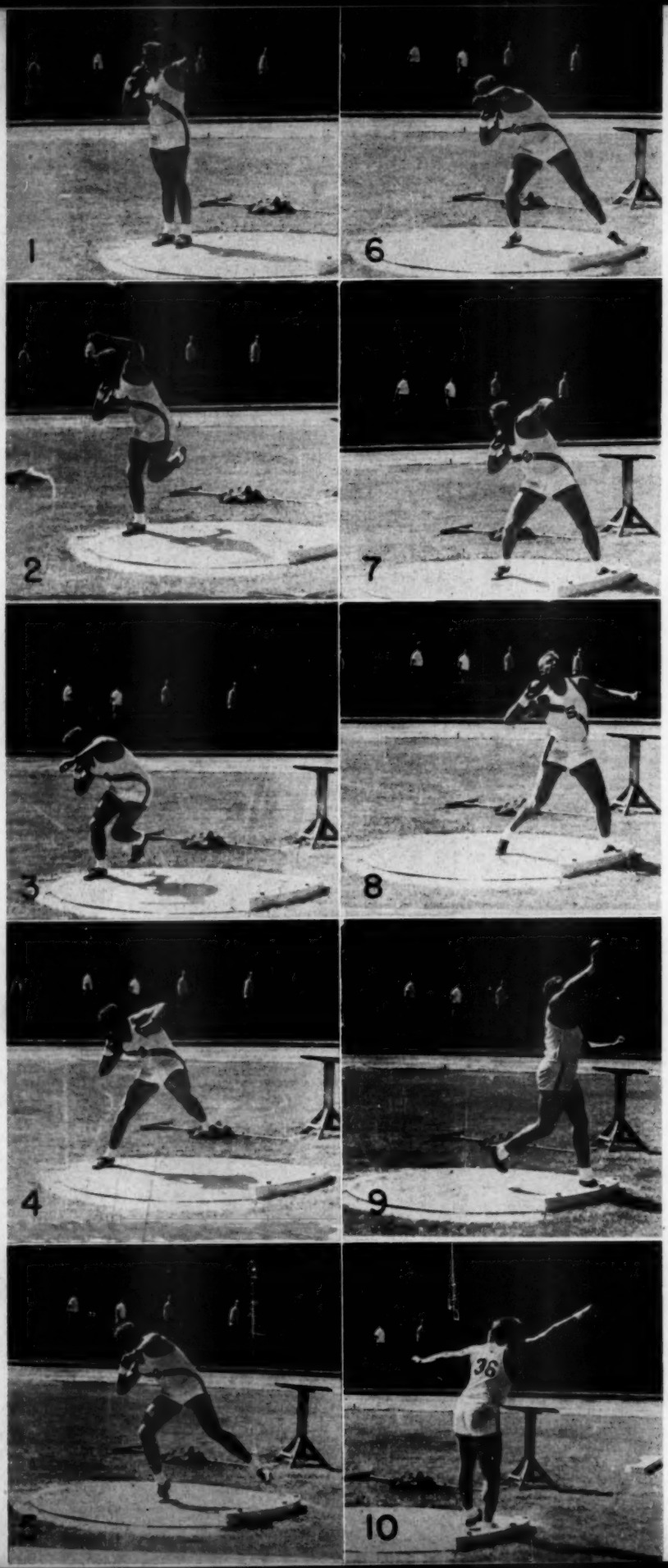


Shot Put

OTIS CHANDLER

By

JACK WEIERSHAUSER
Track Coach, Stanford

THESE pictures were taken at the dual meet with the University of Southern California in 1949. Since that time Otis Chandler has changed his start by the use of a forward leg swing in order to loosen his hips and allow more time to get off balance.

Illustration 1. In the shot put, the start is of the utmost importance because if it is not done properly the putting position cannot be correct. It is our opinion that the first three feet of the circle should be used only to (1) gain momentum of the body weight and of the sixteen pound shot and (2) to get into the fundamental putting position. Therefore, since effort is to be at a minimum, the putter should eliminate all unnecessary "balancing" motions and should be as relaxed as possible. Note that Chandler is standing on both feet in a perfectly natural position.

Illustration 2. The off-balance drive may be obtained by the use of three simultaneous actions: (1) Dropping the right shoulder (2) bending the right knee and (3) lifting the left leg. When the right shoulder is dropped, the left hip slides forward, and when the weight is off balance the putter drives with the right leg, and easily gains the necessary speed across the circle. It is important to understand that this part of the put is preliminary to the actual putting action. Speed is measured from the moment the right foot leaves the ground until the shot leaves the hand.

Illustration 3. This picture shows the tendency of Chandler and of other putters to lean forward at the hips instead of back, and keep the back in a straight line with the line of the put. The hips have slipped forward thus allowing the man to get into the off-balance position. When this weight reaches a certain point the right leg is driven hard and then recovers quickly to a position under the right hip.

Illustration 4. This picture shows the start of the leg drive. Notice that the line of the chest is behind the hips, gradually coming to a more upright position from the start. This

(Continued on page 34)

ampions

JIM FUCHS

By

FRANK RYAN
Field Coach, Yale

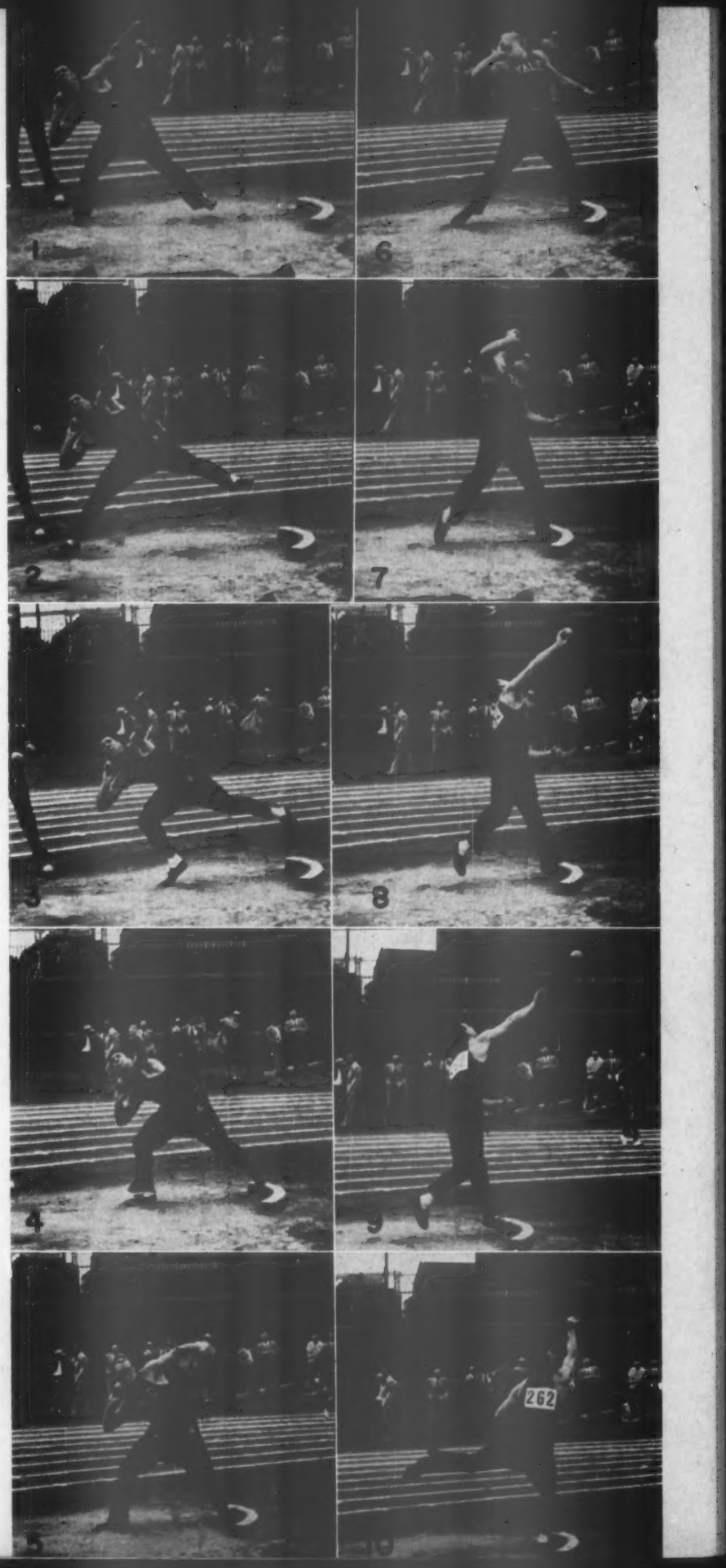
THESE excellent action photos of Jim Fuchs reveal that his form is substantially in accordance with generally accepted shot putting principles. Yet, he does differ from other good shot putters in several respects. Some of the deviations are obviously quantitative, whereas others verge on the qualitative. The latter may have contributed to making him the greatest shot putter of all time.

In Illustration 1, Jim's starting position shows good body alignment. The elbow is squarely behind the shot and high enough to make certain that shot height will not result improperly from arm action alone. Note that a straight line can be drawn from the left hand to the right elbow. To the bewilderment of many observers Jim's extreme body lean to the rear does not seem to impede forward speed.

After an unusually abbreviated preliminary left leg motion, the hop across the circle begins as shown in Illustration 2.

As do all good shot putters, Fuchs, as shown in Illustration 3, is completing the hop without impairment of body alignment. The extreme bend of the back is striking since it almost reaches the horizontal. Probably no other shot putter has ever attained such a bend. The position of the feet in this picture are particularly instructive since they further continuity of motion. The right foot is cushioning the impact of landing, while the left foot is still in the air. Simultaneous landing of the feet would have a braking effect.

Illustration 4 demands careful scrutiny because it shows the real secret of Fuchs' greatness. Note the bend of his back and right leg. This position permits a long blow on the shot. Jim's exceptionally powerful back and legs allow him to take full advantage of this extreme position. It is doubtful that such a position would be the optimum one for the average shot putter. Notice that the right toe is pointed well toward the rear. Although this foot position is traditionally considered an error, it undoubtedly helps Fuchs "get away."



Contrast Fuchs' head position with that of the novice who usually looks toward the intended direction of the throw.

In Illustration 5, Fuchs' tremendous leg and body drive are well under way. The sequence of motions are right leg drive, upward forward motion of the back, and arm drive.

Although in Illustration 6 the big muscles of the body have already done much of their work, the shot remains close to the neck.

At the stage shown in Illustration 7, the shot is well accelerated and the arm drive begins.

The change observed in the left leg from Illustration 7 to Illustration 8 indicates that the left leg serves more than simply a bracing function; it makes a definite contribution to the drive. Observe that Fuchs' right foot actually leaves the ground before the shot is released. Freedom from the traditional chore of anchoring the right foot affords a fuller body drive. Notice the high sweep of Fuchs' right shoulder and the low backward thrust of the left arm. This shoulder action reduces the possibility that a rotary movement will be introduced.

The reverse, which is begun in Illustration 9 and completed in Illustration 10, is essential to the control of momentum and a full follow-through.

Chandler

(Continued from page 32)

aids in getting the weight of the shot in an upward flight by the use of the large trunk and leg muscles. Chandler is hopping fairly high in this picture and therefore his weight must settle down when he lands. This breaks the level line of flight of the shot and is a very common fault among shot putters.

Illustration 5. This picture shows the action of the right leg and the body weight in good position over the right leg. The right shoulder has been brought back, called "cocking," as shown by the left forearm pointed at the camera. The left foot has not landed as yet.

Illustrations 6 and 7. More of the shoulder cocking is shown in these pictures. If the shoulders were straight with the line of flight of the shot at this point, this position would be the ideal fundamental putting position. Since the body weight is moving forward across the ring, and since the shot cannot be put through the body, the actual putting effort cannot be started until the right shoulder has reached this line of flight. The body weight has floated too far forward over the left leg.

Illustration 8. The actual put is now under way, but the power of the right leg is lost since it has straightened as the weight came forward. The right leg must be in a position to drive the hips and body weight to a forward position.

Illustration 9. The initial punch comes from the hips, through and to the shoulder, with the arm taking over when the shoulder has punched forward. This is a straight line drive and not a rotary action. The large muscles of the leg and trunk act upon the moving shot which is "lighter" than a stationary shot. Then the smaller but faster arm muscles keep this speed increasing. Chandler should be in a better follow-through position, reaching over the toe board after the shot.

Illustration 10. Chandler did not employ a reverse, but is learning it this year. His performance, no doubt, will be improved by the proper use of the reverse. A reverse should be a consequence of the put, but when it is properly timed it can add to the distance of the put by allowing the right hip and shoulder to drive more to the front with the shot. A reverse that is done too soon removes the right foot from the put, and the man has nothing to drive the body weight forward. It is important that there be a foundation to drive from, thus the common saying that the shot is put with the hips and legs. This put was the winning effort of 54 feet, 11¾ inches.

The Science and Practice of Warming-up

(Continued from page 30)

moderately variable weather conditions. Certainly adverse weather conditions have a bad influence on performance.

Each individual was asked some questions pertaining to his warming-up procedures and opinions. The following question has three parts. (a) *Normally, what procedure did you follow in warming-up?* (b) *Did the degree or thoroughness of warming-up vary on practice days and on competitive days?* (c) *About how much time did your warming-up require?*

Patton "Jog one-half a lap, exercise, run 3 to 4 laps of wind sprints, and do practice starts which are built up to full speed. Warm-up takes about 40 minutes. The practice and competitive warm-up does not vary."

Cox "Jog until the legs feel loose; do stretching exercises such as touching toes and twisting body trunk, and a little sprinting (30 to 40 yards). Warm-up is the same on all days. My warm-up took a variable amount of time — longer on cold days."

Littler "I used time limit instead of so many yards or exercises. This varied with the weather. My warm-ups, including plenty of running, take about 45 minutes."

Rhoden "On the day of my 45.8 seconds 400 meter run, I jogged ¾ mile, increasing the pace each quarter-mile. After this, I walked a quarter-mile — stretching and bending — concentrating on complete relaxation. This was followed by a 300 yard sprint around a curve. Warm-up takes about 30 minutes and varies on practice and competitive days."

Barten "For 1 mile: start at a jog, run the third quarter at ⅝ speed, and finish with a jog. Then walk 220 yards, 10 minutes of hard calisthenics, and 3 50-yard wind sprints."

Bowers "I jog slowly and easily for 1½ miles followed by 3 or 4 100-yard sprints. On practice days I warm-up 2 miles or more. The warm-up is started an hour before the race is scheduled."

Gehrmann "I warm-up by jogging, stretching exercises, and striding for a half-mile. More warming-up is taken on practice days. Generally the warm-up takes about 15 minutes. Temperature causes warm-up variation."

Pruitt "My warm-up normally covered 2 to 3 miles and took about 45 minutes. There is no difference in warm-up between practice and competitive days, unless on some competitive days I took slightly less warm-up due to the presence of adrenalin."

Dodds "Slow jog until sweating freely, then exercises, rub, and slow jog until race. I took some wind sprints after sweating. My warm-up took 1 hour and did not vary for

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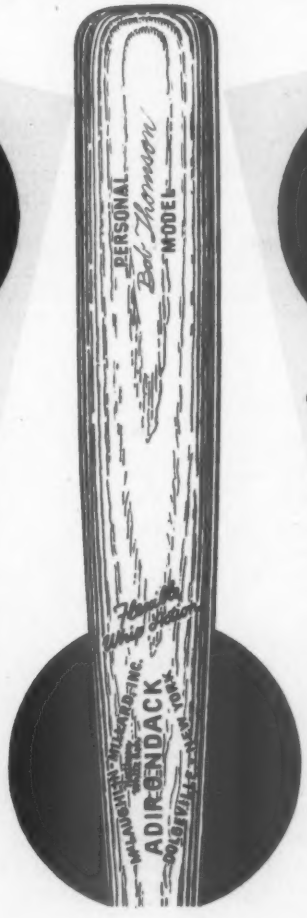

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practice and competition."

Karnes "Jog and walk 2 miles, and four straightaway sprints. My warm-up took 1 hour and did not vary except for extreme temperatures."

McGuire "Run one-half speed for over a mile, do a few light exercises, and stride 3 straightaways. I warm up more thoroughly on competitive days. The usual warm-up takes about 30 minutes."

Wilt "I run and walk 1 to 2 miles on grass, take 2 50-yard sprints, and some calisthenics. My warm-up is always thorough but the amount depends upon how I feel, temperature, etc. Warm-up takes 15 to 20 minutes with 10 to 15 minutes' rest before the race."

Ashenfelter "My warm-up depends entirely upon my condition at the time of competition. If I'm stiff I warm-up more. If I'm tired I warm-up very little. I warm-up less on hot days. Normal warm-up takes 10 to 25 minutes; about 45 minutes before the race."

Black "I begin with a 2 mile jog (first mile in 7 minutes, second mile in 6 minutes), followed by a 440 walk and some three-quarters speed sprinting (3 to 5 times, 150 to 200 yards each). Some body stretching exercises are mixed throughout the warm-up. The warm-up takes about 1 hour and is finished 20 to 30 minutes before the race."

Attlesey "On hot days it takes less time to warm-up, hence, more strength is left for competition. All my best times were run either in extremely hot temperature or when I was more tired than usual."

Fleming "Thirty to forty minutes of stretching exercises after 1 or 2 laps of slow jogging, and 1 mile of wind sprints. Gradual warm-up over 4 to 6 hurdles, increasing speed to maximum effort. My practice workouts varied because on practice days I worked on conditioning as well as the mentioned warm-up. Actual time for the warm-up varies with my condition and the weather."

Morris "Twenty minutes of jogging and exercises and some hurdling. Over-all warm-up took 30 minutes and did not vary with practice or competition."

Dixon "On practice days I run 1 mile of straightaways walking the curves, and take one-half hour of calisthenics. On competitive days I take the same warm-up except the running and walking are reduced to ½ mile."

Smith "Plenty of jogging and exercises are taken. Practice and competitive warm-ups are similar, and the warm-up takes an hour."

McGrew "I used jogging and stretching exercises for warming-up. I used 15 to 20 minutes of warming-up on competitive days and 1 hour on practice days."

Laz "Jogging, plenty of exercises, some practice vaults constitute the warm-up. In competition the warm-up is more gradual and thorough. It takes about 20 minutes in competition and 5 to 8 minutes in practice."

Richards "Warm-up takes about 15 minutes — stretching and running. I usually do not warm-up too much but plan to warm-up more this year."

Warmerdam "I jog lap, take exercises, wind sprints, and practice vaults. My warm-up takes one-half hour."

Chandler "General exercises, a few short wind sprints, a couple of standing puts, and a couple of regular puts constitutes my warm-up. It takes about 10 minutes."

Fonville "I sprint for 15 to 20 minutes, then throw from a stand for 10 minutes, and finish with 2 or 3 times across the circle."

Fuchs "My warming-up varies with the way I feel and how well I am doing on warm-up throws. My warm-up varies on competitive days due to different mental and physical attitude. The warm-ups vary, usually 10 to 15 minutes."

Lampert "I jog one-quarter mile, take 10 toe touches, 5 deep knee bends, 5 short sprints, and 4 or 5 throws, depending upon the temperature. The fewer practice throws I take the better is my performance (4 throws minimum). My warm-up takes approximately 5 minutes."

Thompson "My warm-up begins with jogging and warming-up exercises for 10 to 15 minutes, then easy throwing, 10 minutes. The warm-up takes 20 to 30 minutes in practice, 15 minutes in competition."

Fitch "Run a little, and throw about 25 times. In practice and competition I use the same warm-up. It takes 25 to 30 minutes."

Frank "I take a few exercises, a short run, and throw the discus (hard). My warm-up does not vary with practice or competition, and takes about 10 minutes."

Held "My warming-up consisted mostly of stretching my muscles while keeping them relaxed. On my best days I do practically no warming-up (just a few easy throws). My practice warm-ups vary greatly."

Pickarts "My general warm-up procedure consists of exercises, jogging and easy throwing. I warm-up slowly and well for practice or competition. Warm-up takes ½ to ¾ of an hour."

Roylance "Some stretching exercises, jogging a lap, practice throwing, and more stretching is my basic warm-up. On practice days I use the warm-up as a conditioner so it is longer. On competitive days I warm-up as little as necessary to get best distance. Practice warm-ups take 20 to 30 minutes and competitive warm-ups take about 15 minutes."

Summarizing: The sampling of opinions has not been quantitatively adequate for statements connoting general practices of warming-up among champions. From the data collected on these questions, warming-up at the championship level appears, for the most part, adequate and well chosen. Since champions are exposed to good coaching techniques and motivation is high, adherence to the best principles of warming-up would be expected.

The average collegiate performer and some champions could use greater emphasis on warming-up. High school performers are definitely inadequate in their warming-up. Some high school coaches do a superior job of prescribing and adapting the warm-ups, but the majority do not give warm-up its due consideration.

Each individual was asked to give his opinion regarding the necessity and advantages of warming-up.

Patton "Adequate warm-up is a necessity for good performance and reducing injury."

Cox "A runner should always warm-up sufficiently to have his muscles loose enough to prevent injury."

Littler "The warmer you are the better your event marks will be."

Rhoden "Advantages gained are: introduction of correct relaxation, physiologic adjustments to the increased demand for oxygen, and for effective elimination of the byproducts of muscular work."

Barten "Warming-up is definitely an important necessity, but mental preparedness and determination are equally important."

Bowers "A thorough warm-up is all-important because it reduces chances for pulled muscles and sprains, and the body will perform better if it has been brought to racing conditions slowly."

Gehrmann "Warming-up the muscles and loosening the body are advantages of warming-up. Working up a sweat is not necessary. If the body is in top physical condition, the warm-up should be just enough to get circulation pitched to the coming effort."

Pruitt "Athletes must have adequate warming-up; most of them don't warm-up enough."

Dodds "It is important. The tendency is not to warm-up enough. Each

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man is an individual and individual temperament should be taken into consideration by the coach."

Karnes "From personal experience, I find that a thorough warm-up is a necessity. The theory involved is to run as hard during some phase of warming-up as you will run in the race."

McGuire "The better and harder the warm-up, the better the race."

Wilt "It is absolutely necessary. The advantages of warming-up are beyond question."

Ashenfelter "It all depends upon the individual. I think it helps me to be well loosened up. By warming-up we also get our body functions (lungs, heart, etc.) toned to our activity."

Black "No one will question the advantages of warming-up. From a physiological point of view it is a must. We have to go through a definite routine in order to prepare the body for a maximum effort."

Attlesey "Warming-up is very important. A sprinter and hurdler should be a little tired before his race."

Fleming "Warming-up is a physiological necessity."

Morris "There is an art to warming-up correctly. Every athlete should use a systematic warm-up adapted to himself."

Dixon "The most important element toward championship performance is proper relaxation — this being attainable only by a thorough warm-up. Although highly improbable, it is far more beneficial to be warmed-up too much rather than not enough."

Smith "It is very necessary. An athlete will compete better if his muscles are loose."

McGrew "Warming-up is a necessity. On competitive days I warm-up less so my legs won't lose tone or spring."

Laz "Warming-up is extremely important. Many coaches and athletes do not realize its true worth and neglect it."

Richards "Warming-up is good, should get up sweat. It is not absolutely necessary in a warm climate."

Warmerdam "It is a must to prevent muscular injury and for best performance."

Chandler "It varies according to the individual and the temperature. Everybody has to warm-up some; I don't need much warm-up."

Fonville "Warming-up varies with individuals and the weather. It may be used effectively to gain poise, and to bring the athlete to a peak for his competitive performance."

Fuchs "I don't believe it is possible to generalize on warm-ups because my own is variable."

Lampert "Warm-up is essential to top performance."

Thompson "It is very important before workouts and competition. Considerable time and thought should be spent on finding the amount of warming-up necessary for each individual."

Fitch "Warming-up is needed for best performance."

Frank "Warming-up is a physiologically sound necessity. It gives confidence, experience in the ring, relaxation, and the realization that one will have to throw hard in the meet."

Held "When a feeling of excitement comes easy, I need almost no warm-up and concentrate my energy into 4 or 5 good throws. On days when I do not experience a feeling of excitement I need more warm-up, and I still cannot overcome a feeling of awkwardness and properly concentrate my energy. Probably my bad days are more psychological than physiological."

Pickarts "I think it is very important to have warm, loose muscles for javelin throwing. I have made the mistake of warming-up inadequately just once. As a result, my sore arm makes it doubtful that I will ever throw again."

Roylance "Naturally the warm-up is essential for practically every athletic event, especially track. The warm-up will vary for each event but it is essential to be at a peak (well warmed-up) just before throwing. Warming-up means so much to me because it took only one throw to "wreck" my arm for the entire season."

Summarizing: The consensus is that of high regard for the necessity and values of warming-up. Some athletes mentioned the necessity of adapting the warm-ups to the individual. The coach has the important job of explaining warming-up to the squad so its advantages and procedures will be clear. Then the coach should help each boy to work out a warm-up which is adapted to his needs.

Opinions on Warming-Up from Two Olympic Coaches

Dean B. Cromwell (track coach emeritus of the University of Southern California and head Olympic track coach, 1948):

Sprinters Walking and exercises should be part of each day's workout. Some helpful exercises are: stretching, bouncing, lifting the knees, the bicycle pedal, and pull-ups and push-ups. Jogging should not be overdone, but wind sprints are always good.

Runners Exercises that emphasize stretching of the hip and leg muscles and strengthen the abdominal muscles are recommended. The building up of the abdominal muscles cannot be over-emphasized, for these muscles help lift the thigh each time the leg swings forward. Walking, alternated with jogging, is excellent. The number and speed of wind sprints varies with the runner's distance. Long distance runners need longer and slower wind sprints than are recommended for middle distance runners.

Jumpers Running and stretching exercises are recommended. Walking, jogging, and wind sprints should be taken according to individual needs. Everyone should walk at least 2 miles a day. Some good leg exercises are: knee bending, kicking, and hurdler's stretch. Abdominal and arm exercises should be included.

Throwers Shoulder exercises are important. Some of these are: push-ups, pull-ups, standing and walking on the hands, and arm exercises. Abdominal exercises are needed and some walking; jogging should be part of each day's warm-up. The exact warm-up varies with the event and the individual.

Costa Holmer (chief coach for the Swedish Olympic Team in track and field):

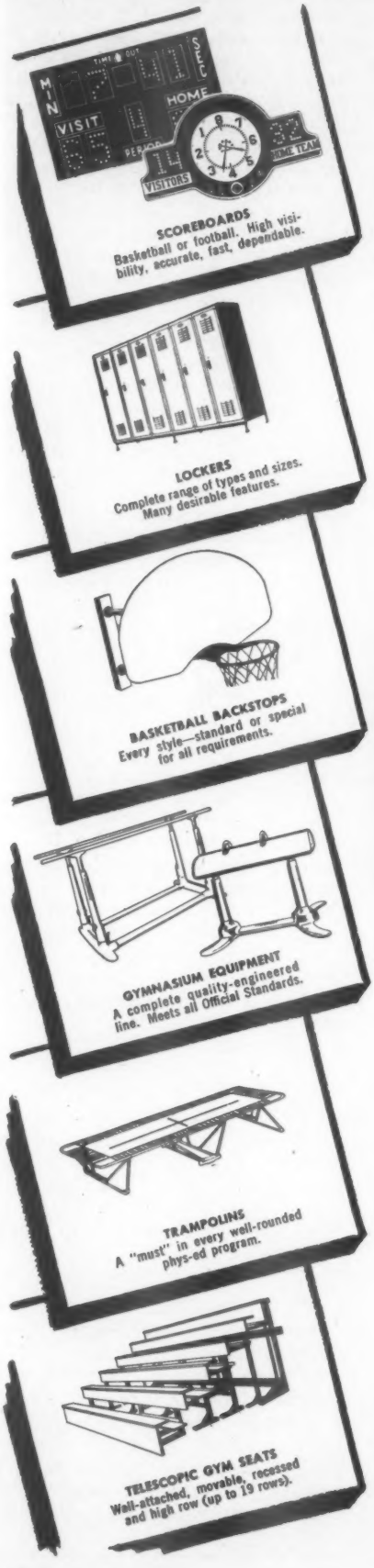
Sprinters They should warm-up with some slow and easy jogging, with some wind sprints of 20 yards and gymnastics. Sprinters, jumpers, and throwers have no rest between the warming-up and performance.

Runners They run in an easy tempo until perspiration appears. Easy gymnastics are part of the warm-up. Henry Kalarne and Gunder Hagg run about 30 minutes on the grass or in the wood at an easy speed. Wind sprints are intermingled with the running. After this phase of the warming-up they rest 10 minutes in the dressing room. Ten minutes before the performance they begin a new warm-up in easy tempo until the start.

Jumpers Easy jogging with small steps, approach running and gymnastics. Pole vaulters jump 2 or 3 times over 13 feet if they are good for 14 feet.

Throwers Easy jogging with small steps, approach work and throwing with implements which are about 10 per cent heavier than implements with the right weight.

The second part of this excellently prepared article by Mr. Miller will appear in the March issue, and will deal with an analysis of warming-up, from a general standpoint as well as warming-up by events.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Progressive Basketball *by Everett S. Dean. Published by Prentice-Hall, Inc., New York. Two hundred and seventy-one pages.* $3.00.

This popular book first published by the author in October 1944 has gone through six printings and is now being distributed through Prentice-Hall. Since the book was published it has held a position among the top basketball books. Prentice-Hall in taking over the distribution has modernized the layout and readability.

Sports Equipment *by Virginia Bourquardez and Charles Heilman. Published by A. S. Barnes and Company, New York. Three hundred and fifty-eight pages.* $5.00.

The authors take every conceivable piece of athletic equipment and discuss the points to be taken into consideration when selecting such equipment; the means of caring for such equipment; and, finally, how the equipment may be repaired. With the high cost of athletic equipment and the possibility of equipment shortages, this is a book that every school should have.

Grantland Rice's Official Baseball Box Score Book. *Published by Wells Publishing Company, Leonia, New Jersey.* $1.50.

The book is 8½ x 11 inches in size and will handle twenty-five full games. This book has been used as the official score book during the last three World Series and contains the official rules for scoring. We like particularly the way the book has been set up to allow space for substitutes in their proper batting order. There is space for an inning by inning summary as well as a complete game summary, even space for the weather, time of game and attendance. In fact, this is the most complete score book we have ever seen.

From Here and There

(Continued from page 4)

Polytechnic High in Fort Worth that fall, and in 1923 became freshman coach at his alma mater. In 1934 when Francis Schmidt left for Ohio State, "Dutch" was appointed head coach. . . .The T. C. U. stadium is designed according to the Ohio State stadium and is being built as funds are available. The northern end of the stadium will eventually be enclosed to complete the horseshoe. The wind, whistling down from the north, has caused "Dutch's" coaching colleagues to dub the field, "The Meyer Wind Tunnel."

BASED on reports from 421 member schools of the Minnesota State High School League, the median school played its first football game of the 1950 season during the week ending September 16; closed its football season during the week ending October 28, and played a total of seven games . . . Jack Kirk, former University of Pennsylvania track captain and 400 meter runner on the 1948 Olympic track team, has been named as aide for Ken Doherty at Penn. Kirk succeeds "Boo" Morcum who has gone into military service. . . .Don McEwen (see article in this issue) Michigan's great two miler, is known around the cinder circuit for his quick wit and repartee. Accompanying the Michigan team to the Rose Bowl, Don being a Canadian was asked what he thought of the Grand Canyon. "What a place for used razor blades," Don cracked. . . . Marquette's familiar wartime father-and-son combination of Coach Bill Chandler, and guard Bill Chandler, Jr., is again doing business. Under relaxed wartime eligibility, Bill, Jr., starred for five years at Marquette, while he was a navy medical student. After receiving his commission he served for three years with the navy and is now practicing in Milwaukee. He recently signed to coach the Marquette freshman team while Bill, Sr. is now in his 21st season with the Marquette varsity.

Broad Jump

(Continued from page 13)

lengthening the distance between points *BA* and *CA*. In all cases, points *B* and *C* should be moved forward or backward in a constant ratio.

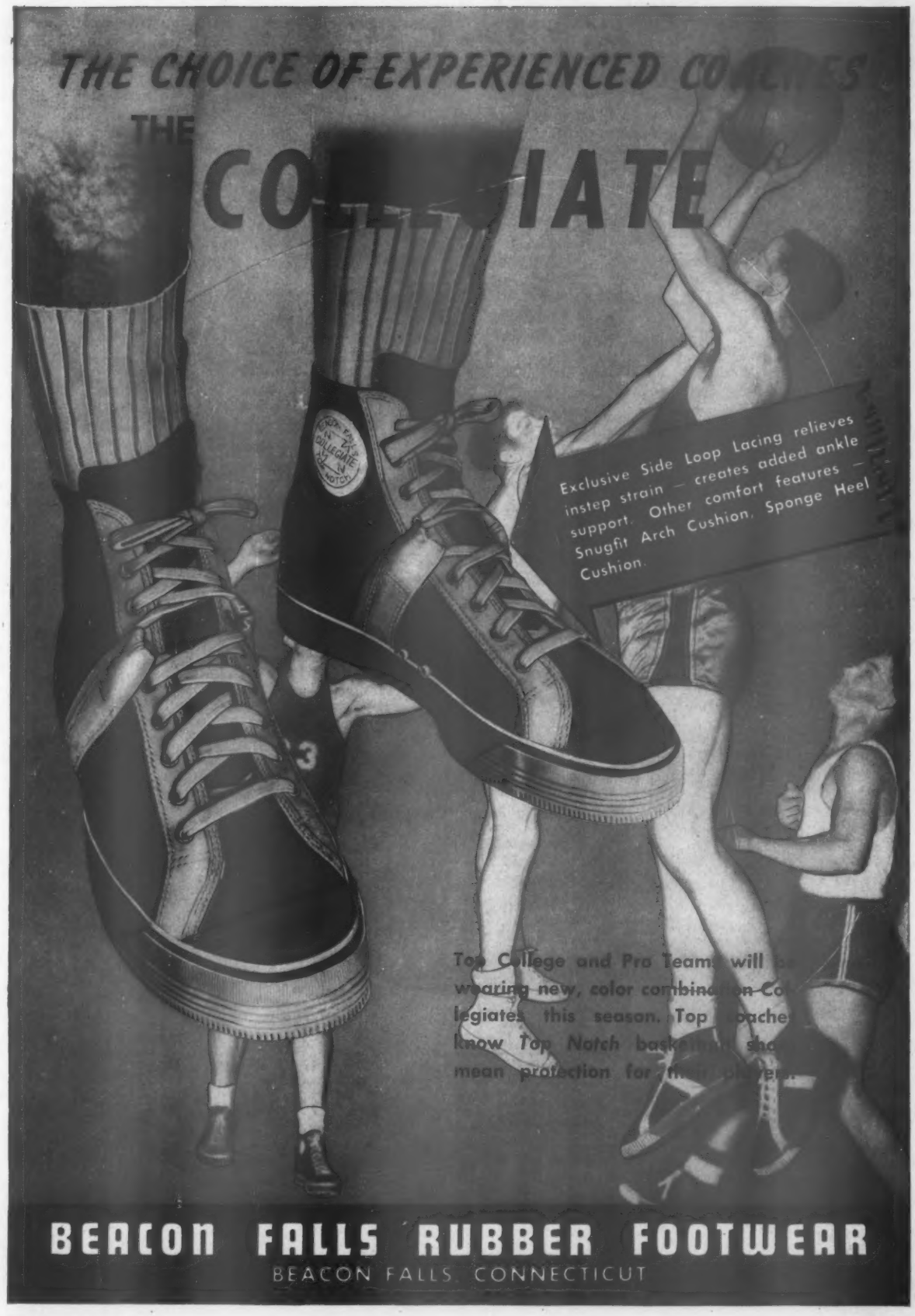
In conclusion, several suggestions are offered which we believe will prove to be of assistance in the running broad jump:

1. Time should be devoted to practicing running through the steps so that check points may be reached with great accuracy.

2. Effort should be made to equalize the stride. This requires concentration and frequent measurement of the distance between foot marks.

3. Co-ordination may be gained by practicing leaping off the broad jump board from a restricted run of twenty feet, thus enabling the competitor to focus effort on the form and training

CHARLES BEAUDRY is a former national decathlon and pentathlon champion, having competed for Laval University in Canada and Marquette University. Primarily a sprinter and quarter-miler, he performed in the hurdles and the broad jump as secondary events. His best jump was 23'8" made in 1947 at Montreal.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of the nervous impulses toward the development of an automatic jumping reaction. This in turn will allow greater nervous concentration on optimum speed, relaxation, accuracy in reaching check points and the development of positive acceleration before the spring into the pit.

4. Care should be taken to protect the heel of the jumping foot from bruises. The judicious application of tape and resilient rubber will pay worth-while dividends.

5. Finally, broad jumpers, at the risk of losing valuable muscular spring, flexibility and resilience, should avoid training on hard surfaces such as cement, rigid floors or hard tracks. Striding and sprinting to develop muscular tone and strength may well be restricted to grass. Many European coaches feel that a tremendous amount of muscular stiffness and loss of spring may be avoided by observing the above suggestion.

Junior High

(Continued from page 24)

ard of age, height, and weight in segregating competition.

One of the major concerns of educators is the danger that the competitive program will usurp the place of the intramural and physical education program. There is evidence of a conflict in the use of personnel, facilities, and time. The conflict does not seem an irreconcilable one, providing intelligent planning is directed toward making the two programs complementary, and an integral part of the over-all program of physical education. Failure of coaches and principals to co-ordinate properly all phases of the complete program should not be used as an argument designed for the scrapping of a certain portion of the curriculum.

The argument advanced discriminating against any program designed for only part of the student body hardly seems sound. Then the various special features of the total school program such as dramatics, debating, the band, and other such activities could be equally criticized. The competitive football program would seem to be designed to meet the individual needs of a selected group, but at the same time add to the morale of the entire student body.

In Texas over 16 per cent of the male student body of reporting junior high schools competed in football in 1949. If the city schools are excluded, the figure rises to almost 25 per cent.

Although this study was confined to the status of football in the junior high schools of Texas, it was also ascertained that only two states actually prohibit junior high school football; only seven sponsor such a program, but thirty-eight state athletic associations admitted the existance of the activity at least to a limited degree. Results of the Texas survey may not be considered typical, but they do indicate the possible need for similar studies in other states.

It would be well to consider the findings given here not as final proof, but of sufficient worth to warrant possible modification of present viewpoints. It is to be hoped that the group now restudying the whole problem of interscholastic competition in junior high schools will be realistic in obtaining direct data to support their views, and not accept a resume' of college classroom opinion. The fundamental drives of the American boy must be considered in reaching a conclusion regarding what constitutes the junior high school program. The elementary and junior high school boy should be observed from September to November and then it should be determined whether or not his behavior in regard to competition in football is artificial or basic. Perhaps his behavior is an expression of an American heritage which must be supervised and channeled, not contradicted.

McEwen

(Continued from page 7)

able performances, however, were a 4:12 mile and a 9:18 two mile within the same hour.

For a group of performances like that he needed a substantial background, and it started the fall of his freshman year. Starting in September, for the past two years, he has run six days each week until about November 15. The majority of our cross-country work is done on a golf course near the track. Because we feel the boys see the cinders plenty during the year we do very little work on the track during the fall with the distance men. Due to the fact that we are not concerned with a cross-country schedule, our distance men do very little work at cross-country pace (four miles). The pace work we are concerned with during the fall is considerably faster than cross-country pace work. For instance, while McEwen may work six miles early in the week, we may break down as low as a series of sixty-second quarters late in the week. We feel that if we do not break down to the shorter distances there is a definite chance of certain boys developing a slower rhythm than they need for their event on the track.

Our actual cross-country distances range from one and one-half miles to six miles, but once we start outdoor work in December we do practically no overdistance work. Our emphasis is practically all on repeated speed work and pace.

For instance, after November 11, 1949, McEwen never worked over one and one-half miles on the watch. In general, the hard conditioning work was done in the fall, and we seldom worked him all out during the week. He doubled on only three occasions during the entire year. Had Don been doubling down from the mile to the half, he, no doubt, would have done so in many meets, but a double up from the mile to the two mile is an entirely different situation. We feel it is the most discouraging double in track.

There is, of course, no magic formula for developing distance runners. There does, however, seem to be a program that is best suited for certain types of individuals, but to work all youngsters as a Wilt, a Gehrmann, a Truex or a McEwen may work, is a mistake. Each of these boys follow a different program since they have different needs. An article of this type should merely illustrate to coaches and athletes that there are many satisfactory ways of reaching the same goal. The important thing is for the coach to realize just what is important for the boy. For instance, the world's leading distance runner, Emil Zatopec, is reported to train primarily on repeated quarter miles. They say he may run as many as 60 quarters per day. It, of course, is obvious that few men could handle that schedule, but that may be what Zatopec feels he needs. One boy may need speed, another strength, and still another may need only con-

DON CANHAM is one of the younger college track coaches and a highly successful one, since succeeding Ken Doherty at Michigan in 1948. Don graduated from Michigan in 1941, his specialty being the high jump. In 1940 he was NCAA and Drake Relays champion and his best mark was 6'7½". He was assistant coach at Michigan from 1946 to 1948.

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fidence. That is why programs differ so widely.

It is impossible to illustrate a week's program for McEwen, since it varies with the time of the year, the distance he is preparing for, and how he happens to feel on the particular day. Following is what he might do in mid-season if he were going to run only a two mile race on Saturday:

Monday—Thirty minutes of warm-up—30 minutes of easy, relaxed work on the golf course.

Tuesday—One and one-half miles on the track at a pace slightly faster than race pace, but not all out.

Wednesday—Repeated 220's, 440's or 880's with a group—relaxed and definitely not up to capacity.

Thursday—Two 880's or three-quarters of a mile at meet pace and very little else.

Friday—Rest.

Saturday—Meet.

In conclusion a word should be said concerning style or form. Don McEwen today is certainly not a "picture runner," but we feel he has an economical method of covering ground.

His form is now comfortable for him; he runs in a relaxed manner, while carrying a reasonably fast pace, and we feel he is efficient. After all, that is everything any form may give a boy.

It is not difficult to write of performance and the visible qualities an athlete possesses. Too often, however, it is the qualities we cannot measure or see, that make the champion. Most great athletes have tremendous determination, ambition and heart. Don Scott McEwen, of Michigan, is no exception.

Physical Education Today

(Continued from page 14)

for them to do so.

Most of our schools now carry accident insurance on their participants, and we think this assures them of much better medical care than they have received in the past.

The largest increase in participation will be in the intramural field of athletics. Here boys who do not have time to go out for the varsity, or those who do not feel they are able to make the varsity, but do want some competition, will flock to the intramural athletic field for participation in touch football, basketball, softball, tennis, badminton, horseshoes, golf, and a dozen other sports.

Another physical education division that is going to be greatly expanded is the camp program. The camp in the past has been mainly a summer program, conducted by private individuals and institutional organizations. Now that school camps have been established in New York, Michigan, and in some of the other states, all-year camping has been proven to be a success. There are certain things which may be taught only in the great outdoors where the boys or the girls can get close to nature, and at the same time practice doing things for themselves.

The importance of health education has reached a new high in our educational system today. A much more vigorous type of person is needed now and will be in the days to come. The education of the whole child should be the main objective of our schools, and a new emphasis should be placed on the emotional, physical, social and mental health of our boys and girls.

The aims and objectives of health instruction must be consistent with the principles of democratic living. The general objective should be development of a sound, vigorous physical organism, capable of meeting successfully life's daily responsibilities and crises.

Some of the items that should be included in health education are: causes of disease, principles of nutrition, oral hygiene, care of the body, avoiding disease, prevention of accidents, emergency care, mental health, vaccination and immunization.

The objectives of physical education most frequently mentioned by our leaders are: strength, endurance, health, skill, speed, agility, physical growth, organic vigor, bodily coordination and control. If this is to be our goal, there are a large number of activities that should be blended into our program. We believe such a program should include: (a) conditioning exercises; such as running and walking, obstacle course, jumping, grass drills, rope climbing, wall scaling, and tree climbing. (b) Combat activities; such as boxing, wrestling, hand-to-hand fighting, judo and unarmed self defense. (c) Aquatics; every boy should know how to swim. He should also know the fundamentals of life-saving, water safety, boating and canoeing. (d) Outing; hiking, camping, cycling, fishing, skating, and horseback riding. (e) Athletics and recreation; the fundamentals of basketball, soccer, touch football, softball, handball, tennis, badminton, table tennis, bowling, and volleyball should be taught to all students. (f) Tests and measurements; after the activities are taught, there should be a definite method of measuring the progress and needs of the students.

In the future, the youth of our country will be better informed as to the care of their bodies. They are going to take more time to improve their deficiencies and then take additional time for health-building recreation to keep in condition. We realize all this must be financed, but we believe our young people are our greatest asset and are worth it.

The youth of tomorrow will have more freedom and opportunity for self-expression in our physical education classes. If a boy or girl, in good physical health, prefers to participate in basketball rather than volleyball, or handball instead of tennis, he or she should be given that opportunity.

It is true that young people like self-direction in their activities, and it is a good thing to let them plan and direct some of these activities. The enthusiasm and leadership of youth should be used increasingly. Of course, we must remember there is no substitute for experience and that our goal is to prepare our youth for self-direction by the time they finish school.

We will find as we grow older that commercial recreation; such as golf, bowling, dancing, and roller-skating will play a big part in the health of our nation. The wise use of our leisure time, and the choice of our activities are very important.

Individual guidance is going to be needed as never before, with all the health fads, nutritional experiments, and food advertisements that are placed before our youth today. It is little wonder they do not know what to do. Our youth must be taught not to try every new fad they hear about, but if they have a defect or an illness, they should get a prescription for that particular ailment. All corrective or preventive physical education should be a definite treatment for a definitely diagnosed deformity.

The physical education teacher will be working with the physician, the school nurse, and the parents to keep the health of our young people at its highest level. Then the co-ordination of the health program with the rest of the school program will be a start on the road to success.

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Pitching Psychology

(Continued from page 9)

tion and the delivery of the pitch from the side. It gives the batter the impression that the pitcher is throwing from third base and this impression or psychological effect is essential for the success of the sidearm sequence variations. The decision with regard to the qualifications of the pitchers, whether or not they can use the sidearm sequences to advantage, is up to the coach. Some pitchers are not versatile enough to use both the sidearm and the overarm pitches.

How the pitcher looks to the batter is a psychological angle that may be used to advantage if it is thoroughly understood that the point from where the pitch is delivered will affect the vision and consequently the hitter's batting efficiency. In the case of the sidearm, or crossfire pitch, the batter sometimes makes the mistake of watching the movements of the pitcher's body, instead of the pitching hand and as a result loses sight of the ball. There is also the added possibility that the batter will turn his head to see where the ball is coming from, and by doing so does not realize he is lessening his hitting efficiency by that movement. This turning of the head is caused by the pitcher's movement of his body out of the batter's ordinary plane of vision (Diagram 1-2). It is easy to understand that a batter may see the ball better if he keeps his head still and watches it with his eyes alone. The overarm pitch permits the batter to direct his eyes more intently in the regular plane of vision (Diagram 3), but the sidearm pitch will cause a turning of the head and thus change the angle of vision. This makes it more difficult for the hitter to focus his eyes as the ball comes up to the plate from a different angle.

Pitching psychology may be applied intelligently only if the pitcher and catcher are very alert to the occurring situations. The following factors aid in the successful application of pitching psychology: who the hitter is, what type of hitter he is; how the batter acts before, during, and after he takes his turn at bat; how many outs there are; the ball and strike count; the score; how the defense is set; and the physical qualifications of the ball park itself.

CARL BOYER lettered in both baseball and basketball at Ohio State, graduating in 1942. During 1942 and 1943 Boyer played for Columbus in the American Association under Burt Shotton and Eddie Dyer. During the war he coached in the services and in 1946 went to Northwestern as assistant to Dutch Lonborg in basketball and Freddie Lindstrom in baseball. The next two years found Boyer handling the same two sports at Evanston, Illinois, High School. He left that spot in 1948 for Cal Aggies.

A Track Meet Clinic

(Continued from page 17)

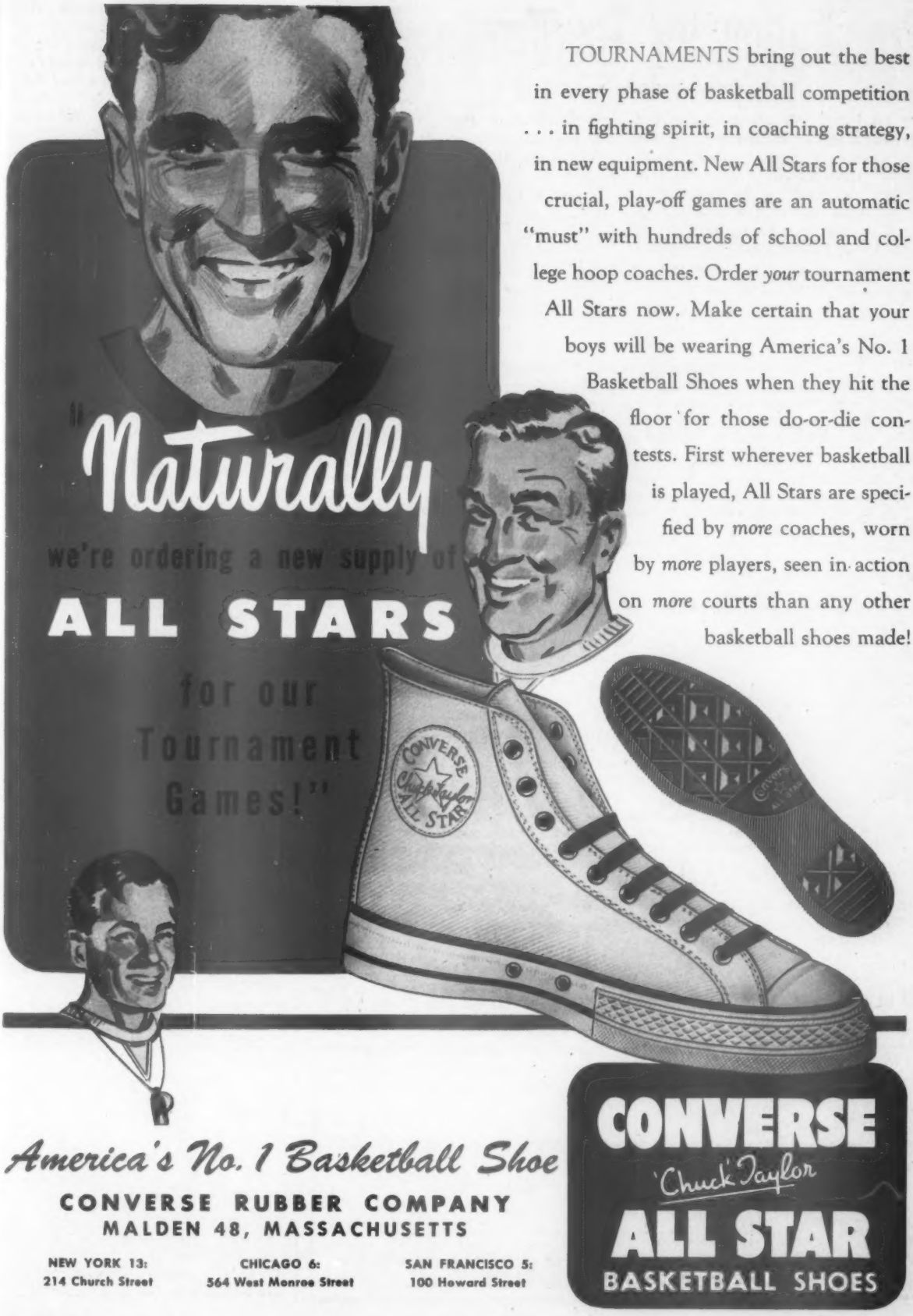
Several blocks are made available for the dash events and the boys on deck make adjustments before being called up. By placing the blocks against a wall or stationary object they are given a firm anchorage. Two hurdles are used in the high and low hurdling events. The distance between the low hurdles is made shorter than the standard distance, but is in proportion to the required twenty yards and the dimensions of the gymnasium floor. High hurdles are spaced to allow the usual three steps. Two entries constitute a baton passing team. Styles of open and closed baton passing are required. The high jump bar at five feet, and the pole vault at nine feet, have been found to be satisfactory heights to bring out the essential features of those events. Floor markings required for the shot put, high hurdles, broad jump, and baton passing zones are marked on the floor with removable paint. The competitors wear basketball or indoor running shoes. A qualified starter is obtained for the dash events and he is given a few minutes to cover the accepted rules governing starts. An official announcer, and a loud speaker system are necessary for a well-managed clinic.

In addition, the routine work on the day of the clinic requires the services of a substantial personnel. Here at Upper Arlington we have been fortunate in finding the coaches, faculty members connected with the athletic program, and the student managers very co-operative in the enterprise. They are available since it is a period of transition in the year's athletic program. Serving as clerks, announcers, and committeemen, and relieved from the tensions of the average athletic contest, they are really hosts to the coaches of the area. Thus, the clinic helps realize indirectly, the objective of fellowship which is very essential in interscholastic athletics.

The clinic is scheduled as an afternoon meeting. Track squads from all the schools in the area are invited to attend. By adhering to a strict schedule, three hours affords sufficient time to cover the program.

As outlined and presented, this program is complete in itself. We have, however, extended it into the evening. The school cafeteria is opened to serve a light lunch to those remaining. A formal program follows and this is designed primarily for the coaches. It is built around motion pictures taken of track meets held during the past season, or pictures taken primarily as a study of special events. Many track films are available and these are studied as closely as films on football and basketball. This is the time to draw on the knowledge of coaches who have constructive ideas about building a track team.

Summarizing our experiences with this style clinic, we find it is practical because it is realistic. It is not as difficult to administer as a track meet involving a few teams. The objective has been to give a wide introductory knowledge of coaching problems to coaches and team candidates. The unbalanced teams entering district and relay meets would scarcely be tolerated in other sports. Coaches themselves are sometimes boastful of their inability to develop discus throwers, high hurdlers, or pole vaulters. As coaches, we are all tolerant of these remarks because our experiences as athletes seldom introduce us to more than one or two skills. Considering that the range of activities extends to twelve or fourteen events, the time and energy necessary to become versatile over such a field seems unavailable. Furthermore, the track coaching position is frequently filled by one whose training is in other sports, hence the need for help is real and urgent. No style or type of clinic is a failure when its goal is to increase coaching knowledge. It is perhaps a greater success when it emphasizes all the skills.



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Preparation for Tournament Play

(Continued from page 10)

than an hour. We must realize the boys will want to continue play, but we as coaches want them to feel that way — always wanting more. In our brief years of coaching, we have found that perhaps one of the best means of getting young boys to be able to play a good, hard-running game, was by omitting practice the day before a game. This theory is even truer during tournament play — don't practice the day prior to the games.

We were then up to the actual playing of the tournament games and did not feel anything new should be tried. If it was, we would probably have had dire results.

As stated earlier, it is very important to play each game as it may come in the tournament set-up. It is the job of the coach to be able to cope with certain ideas that might enter the minds of the boys. Some are over-confident, thus it is a coach's job very tactfully to get the boy into a state of mind where he feels that unless he gives his all, the chances of winning are very slim. We had boys who were the direct opposite of the over-confident and here the job was to sell the boy on the idea that he was equally as good, and in most cases better, than his opponent. We have found from experience that boys do not perform quite as well in tournament play as they do during regular season games. The greatest factor in winning is to *relax* and the coach must go all out to bring this about if his team is to go far in tournament play.

How may we achieve this? The one who knows his team best is the coach, therefore, he can do wonders with the minds of the young men on his team. During this period of the season the only thing to do is *encourage* and use *no discouraging* words. The boys at their best are mentally disturbed, so why cause more worry? Our theory was to let the boy talk about the things he wished to discuss, do the things he enjoyed and eat the food he liked best. We realize this will not meet with the approval of the theorist; nevertheless, we were attempting to win games and as long as we did not impair the health and welfare of the boy, what could be wrong with the foregoing approach?

Very little regarding the manner of caring for boys on the days of games has been mentioned. Our only requirement was that they eat at least three hours before game time and keep off their feet and legs as much as possible.

It might be well to list several points to remember and let us hope they will bring victories in the tournaments this year:

1. Continue using the same offense and do not vary defense too much.
2. Give the boys an opportunity to relax from basketball for a few days prior to going into the tournament.
3. Fundamentals are just as important now as they were earlier in the season, keep working on them.
4. Applaud the strong points of a boy's play and minimize his weaknesses.
5. Impress on the boys that newspaper articles are fine and good, but in order to get the headlines they must produce.
6. Concede nothing to the opponent; impress on a boy that he is equally as good and has many qualities better than that of the rival.

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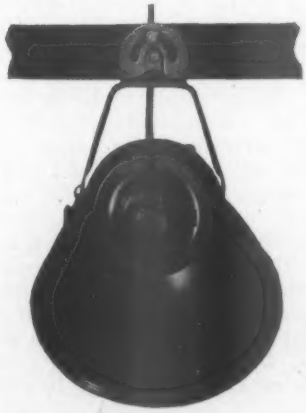

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7. A player must shoot to score, but when he lets the ball go, he should be relaxed.

8. Victories should be worn in the *heart* not in the *head*. The crowds love a winner, but not an egotistical one.

It is our hope that the above points will help the coaches realize a few factors they sometimes overlook. There are many things that could be added but it should be remembered that tournament plans begin with the first practice of the year.

No Guts?

(Continued from page 22)

What about this type of thinking that has crept into the coaching field and has hurt the coach and player alike? We refer to the practice of *labeling* boys as either "gutty" or "not gutty," and doubt seriously that this is an "either-or" situation. We would rather think of our boys as all starting out about equally on entering this world, but possessing a potentiality for developing the quality called "guts."

When they come out for football, or any sport, we like to think that each individual ranks somewhere between zero per cent "guts" and 100 per cent "guts." Actually no boy is totally "gutty," nor is any boy completely lacking in this quality. When thought of in this manner, we have a sliding scale from zero to 100, and since we are not dealing with a static quality plenty of room in our thinking is left to move a boy up or down the scale according to what he demonstrates on the field from day to day.

Another fallacious idea, we believe, is the one that some coaches seem to harbor concerning the *constancy* of this quality of physical courage commonly referred to as "guts."

It has been our experience that it is not as constant a factor as we might like to think. Probably every coach has observed his nerviest boy lose his nerve once in a while. Nine times in ten that star halfback would have boomed into the tackler when cornered, but for some inexplicable reason the tenth time he faltered, and for a fleeting moment the "gutty" boy, was not "gutty." Perhaps for a moment his mind let some of his old fears creep through — fears that were almost, but not completely conditioned out of his thinking. In other

words, for a fleeting second he was again that green sophomore just out for the first day of practice.

This brings us to the consideration of just what part emotions play in this phenomenon of physical fear. We know it is impossible to experience physical fear without certain emotional reactions coming into play. Nature has instilled in us a complicated alarm system to protect us from bodily harm.

We have all felt the racing pulse and accelerated respiration before a contest; we also have learned from physiologists that certain glands begin to secrete a greater than normal amount when physical danger is imminent.

Physical and emotional fears, then, are so highly inter-related that it is impossible to speak of one without including the other. We may assume, then, that the boy who is physically afraid is also beset by emotional disturbances as well. This adds to his troubles, and makes his necessary adjustment to the situation even more difficult.

Again, how may the boy gain this emotional control? In the overcoming of his physical fears, this boy's emotional control in any given situation is determined by the sum total of his experiences, relating to any given situation, and how these experiences have affected him as an individual. In this specific case the emotional experiences he has had in earlier life, and the commonness of these experiences with the ones he is facing in a football situation, will determine how he reacts.

What can we do about his deficiency? Again patience, understanding, and offering situations graduated in emotional severity, are the only sensible approach. We may, if we choose, write this boy off as a coward and forget him, but are we doing our job as a coach or as an educator if we take this approach?

There is one other point we would like to mention. We have observed coaches who, because a boy demonstrated lack of physical courage in football, almost forget him completely in all the other sports. In other words, they have stereotyped the individual because of what he demonstrated in this one specific situation — football. This is often a grave mistake since many boys, removed from the situation involving physical fear, are completely different individuals. The star basketball player or half-miler is often not a football player at all. He may be big and fast and well co-ordinated, but because he has not had the necessary experiences to condition him out of his fears of

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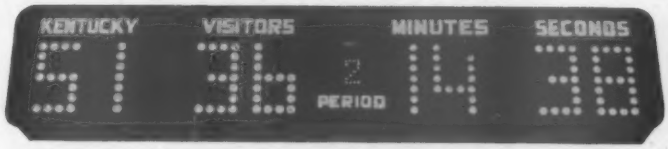

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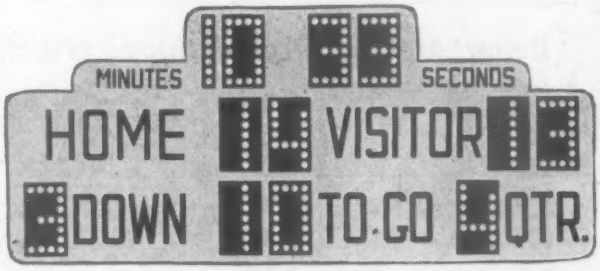

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physical injury he will not even turn out for football.

Our point is, then, that this thing we call "guts" is a specific factor and not a general characteristic that we may stereotype a boy with and forget him forever. Any given factor in any given sport, whether it be "guts" or any other, will have a transfer value to any other sport, in direct proportion to the commonness of such a quality to both sports.

It takes "guts" to play basketball, or run the half mile, or stand up to bat in baseball; but not the same *type of guts* essential to being a football star. Again we, as coaches, may easily pass up a number of good athletes with a dogmatic attitude on this subject of "guts."

In summarizing, we would like to reiterate the following points for consideration as general over-all guideposts for every coach.

1. On the subject of "guts," keep a sliding scale in mind from zero to 100. Give the boy a chance to move up or down; do not stereotype him.
2. Think of the quality of "guts" as being a specific factor and not a general one.
3. Remember the quality called "guts" is not a 100 per cent constant factor in any individual, but vacillates to some degree.
4. Patience, understanding, and more patience and understanding, plus offering opportunities for the boy to condition himself gradually out of his fears, are the basic answers to the problem.
5. Keep in mind that the green sophomore is fighting fifteen years of past experiences, many of them debilitating experiences, and is trying his best to overcome them. He has no one to turn to for help but the coach.

A Brief for Tumbling and Apparatus Work

(Continued from page 16)

ters are another *must* in a safe program. They must learn general spotting principles as well as specific spotting hints for each stunt. Spotters will have to know just where and how to support a performer while not hindering his performance. All this instruction should take place in a special class. Incidentally, these boys will be getting valuable leadership training.

Good equipment, of course, is another prime requisite for safety, as are frequent check-ups on the condition of the apparatus and mats. This is especially true when the equipment has been homemade.

The effectiveness of this safety program is not mere theory. In approximately 45,000 man hours of participation in tumbling and apparatus activity in the past six years at Indiana University there has not been one serious accident. The men were college students, physical education majors, which may cause some to say "Oh! no wonder. They are men, and specially selected at that." However, elementary and high school boys are much less awkward and may handle their weight more easily than men who have had no previous experience in this work. This statement is made only to show that apparatus work can be safe. However, it is not foolproof. It does take constant vigilance and thought.

The first three reasons for not including tumbling and apparatus work in public school physical education programs have been dealt with. We now come to the fourth, lack of teachers with sufficient training to teach it. This is the most serious and valid of the four reasons. The first step in remedying this unfortunate situation is a sincere belief in the worth of the activity.

Participation in tumbling and apparatus work will benefit an individual in the following ways:

1. It will promote individual health and organic stimulation through vigorous exercise involving all parts of the body.
2. The participant's strength will be increased — especially in the arms, shoulder girdle, chest, and upper back.
3. It will develop his neuro-muscular co-ordination which will enable him to work and play with a greater conservation of energy. It also enables the performer to better handle his body and take care of himself in dangerous situations.
4. His flexibility and litheness will be increased.
5. A better sense of balance which lessens the danger of falling on slippery surfaces will be developed.
6. It will promote a sense of relocation, a kinesthetic sense which enables the performer to adjust his body to being whirled about, and to know in which direction he is moving, despite the position of his body.
7. It will condition the participant for other sports. Many pole vaulters, for example, work out considerably on the parallel bar. The ability to

handle the body well is a prime factor of success in any sport.

8. A strong, good looking body will be built. The general body build of most gymnasts is well proportioned. The muscles are the long, flexible type and not the heavy, bulky, piano mover type.

9. When participated in as a competitive sport it will give the individual all of the acknowledged benefits of competition.

10. When used as a competitive sport it provides an activity in which the smaller boys may excel. Most of the other varsity sports place a premium on size and weight.

11. It gives the physically handicapped a chance to participate in and enjoy sports. Poor eyesight, for example, will not lower the participant's efficiency. A victim of infantile paralysis became a Big Ten champion.

12. It is an enjoyable activity, offers fun and recreation to participants, and satisfies an urge supplied by nature.

The above values are more or less inherent in the stunts, and performance and practice are conducive to their being acquired to some extent by the performers. There are other contributions to the student's well-being that apparatus activity can and will make under the guidance and direction of a capable, experienced teacher. These results are less tangible and objective than the others, but they are nevertheless real and valuable. A skillful teacher may use the program to:

1. Develop resourcefulness, initiative, and originality on the part of the performer by giving him an opportunity to devise new stunts or create new combinations of old ones.

2. Develop perseverance by giving encouragement and help on a difficult stunt until it is mastered.

3. Develop leadership, helpfulness and the habit of safety by placing various capable students in charge of squads.

4. Increase the students' confidence in themselves by their gradual mastery of difficult stunts made possible by good teaching and the use of a definite progression.

5. Discourage foolhardiness through insistence on proper safety precautions and proper spotting.

In addition to the above values to the participant, the program has other uses:

1. It adds variety, fun and interest to a physical education program. Tumbling may be easily adapted to all age levels and both sexes. With judicious selection of stunts it may become a coeducational activity. It may be carried on indoors or outdoors, so it is not a seasonal activity.

2. It has excellent entertainment value and may be used for exhibitions or demonstrations between halves of basketball games, at P.T.A. meetings, etc.

Many teacher-training institutions include courses in the technique of teaching stunts, tumbling and apparatus work for their physical education majors. It is hard, however, for many of these men to become proficient in performance due to their lack of training in their earlier years. Because they are not proficient they are not interested. Because they are not interested they do not learn — and consequently will not teach tumbling and apparatus work to their classes when they get out in the field.

A temporary solution to the problem may be found in clinics and in-service training. A city administrator could schedule a number of training periods in which all of the city physical education people could be taught by a competent person. Here again, it would not be possible to teach the

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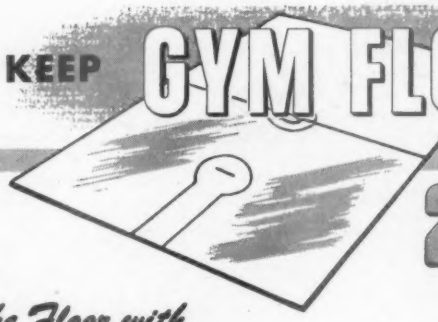

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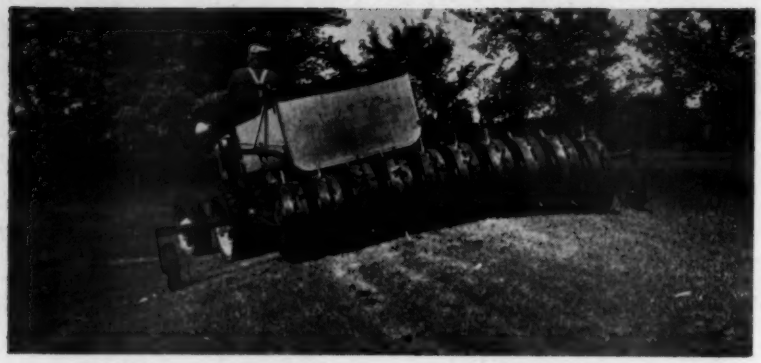

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skills for adequate performance, but much of the preliminary or basic fundamentals could be taught. Skill in performance on the part of a teacher, while it is highly desirable, is not an absolute necessity. A teacher who is able to analyze a stunt according to its mechanics and who can give his students the benefits of this analyzation through teaching hints and cues may become a successful teacher. Furthermore, if he is able to watch a student's performance and tell the student the reason for his failing the stunt, and how to correct his mistakes, he will be an excellent teacher.

Clinics for the purpose of training people for the teaching of apparatus activity are at best makeshift. The permanent solution lies in instilling in the physical education major student a liking, an interest, and a belief in the value of this activity while he is in school. It will be much easier to do this if he has had a good program of apparatus activity in his own high school experience.

We have discussed the matter from the standpoint of the administrator, the educator, the parents and the teacher. There is one more individual to consider — the student. Will he like it? Does it mean something to him? Does it offer a challenge? Is it educationally worth while? The answer is, Yes! — providing sound teaching methods are used, safety precautions observed, adequate time provided and progression according to ability is practiced. The common fault of programs where tumbling and apparatus are included is the fact that the same few simple stunts are taught over and over again from the fourth grade on through high school.

What's wrong with tumbling and apparatus work? Nothing that a little time, thought, energy and enthusiasm cannot correct. Why not use it?

Fencing

(Continued from page 15)

b) *Raising a clenched fist over his head* indicates a touch has landed foul or on an invalid target before any other hit, and he indicates who landed the foul touch by directing his clenched fist at the fencer (Illustrations D-4A and D-4B). To indicate *no score* he will *cross and uncross his arms in front of him with fingers extended toward the floor* (Illustration D-2).

c) When side-judges disagree on any one specific action and it has the

"right of way," the *no score* hand signal should be used (Illustration D-2).

7. The director should use the following hand signals and verbal statements for starting action, penalizing a fencer and for time-outs:

a) To start the bout or action, he should raise his arm horizontally beneath the crossed weapons and say, "Ready?" The fencers should then automatically step back. As the director says, "Fence," he drops his arm sharply to his side to indicate to the timers that time is in (Illustration D-1). The contestants may then start fencing.

b) To penalize or warn a fencer for a violation, he will wave one arm overhead and then up and down in the direction of the individual being penalized and say, "You are warned" (Illustrations D-5 and D-6). If it is the second successive warning before a score is made, or if the director feels that according to the rules the fencer should be penalized one touch, he will use the violation signal (Illustration D-5), and award the touch to the opponent by using the score signal (Illustrations D-3B and D-3C).

c) Crossing and uncrossing his arms overhead will indicate time-out which should be supplemented by blowing a whistle and saying "Time out" (Illustration D-7).

8. Other recommended procedures that the officials should observe are:

a) The director should use a whistle to halt action. Whenever the whistle is blown, time is out.

b) He should wear a striped shirt identical to those used in basketball or football. A suggestion is for the home school to be able to furnish such a shirt for the director.

c) The director should be at the scorer's and timer's table at least five minutes before game time. He should start the competition on time.

d) During a time-out or between periods during which time competitors are preparing for competition in a new weapon, the officials should not visit with each other unless there is an actual need for such a conference.

e) In no case should an official ever visit with, or talk to a spectator, from the time he appears on the floor until his connection with the competition as an official has ended.

f) Above all, officials should be quick in calling what they see. This is true for side-judges as well as for directors. Hesitancy belies uncertainty. In order to obtain the respect of the fencers and of the spectators, he should be firm, but pleasant, toward the contestants.

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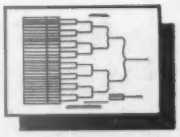

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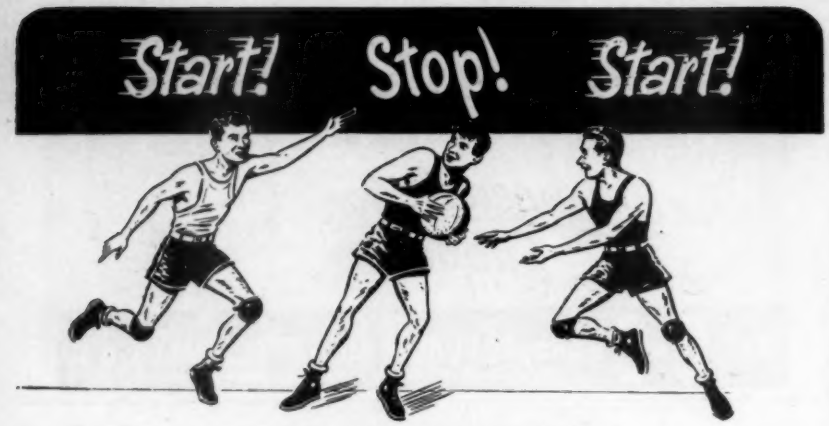

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Baseball Coaching

(Continued from page 26)

ways tell the baserunner the number of outs, and caution him to be alert for a bunt, steal, or a hit-and-run play, depending upon how his team is situated in the score. He must tell the runner to let a line drive go through the infield before committing himself toward second base. He should be reminded of the score at all times. All of this information may be given in ten seconds or less, while the pitcher is waiting for his fielders to get set behind him and while awaiting the catcher's signal for the pitch.

The third base coach being closer to home plate, from the scoring standpoint, must have more reliable and sounder judgment than the first base coach. Scoring chances come spontaneously; they depend upon instant judgment. It is difficult to rectify mistakes made at the far corner in sending runners in to score. Outs at the plate are costly since many runners do not get as far as third base during the progress of a game.

JAMES SMILGOFF has been a frequent and welcome contributor to these pages. After graduating from the University of Wisconsin he played professional baseball and then became a farm-team instructor for the Chicago Cubs. He has served as technical advisor for two movie shorts on baseball and in 1946 was coach under Ray Schalk of the United States amateur team. His teams at Taft have annually been strong contenders for the city championship.

With runners on first and second, the third base coach coaches the runner on second base. When the bases are filled, the third base coach helps the runners on third and second. The third base coach must also keep his hands cupped to his mouth in shouting instructions. His signals should be given clearly and in time for the runner to obey them.

When telling a runner to hold up going into a base with the ball just coming into the first base side of the infield, the third base coach should hold both arms high overhead (Illustration 3). This indicates there is no danger and that the ball is not on its way to the third baseman.

When there is no need for a baserunner to slide, but when the ball is coming into the infield just behind him, or it is being cut off by the shortstop, the third base coach may point to the base (Illustration 4). This indicates to the runner that he should come into third base fast and standing up, but should not over-run the base since the ball is coming in behind this baserunner.

When urging a baserunner to slide, the third base coach should indicate which direction the player should slide on by waving the hands downward and in the direction of the slide (Illustrations 5 and 6). This direction or side, of course, depends upon which side of the base the ball is coming into.

When urging a baserunner in toward home to attempt to score, the third base coach should station himself toward the home plate side of the coaches' box in order to get more time to make his judgment decision, and to be able to see the accuracy of the throw toward the plate before making a decision (Illustration 7). Once a decision is reached to send a runner home to score, the coach should wave his left arm in that direction with a large circular motion that is unmistakable. He may be calling his instructions and encouraging his runner at the same time.

Having done this, and seeing the runner definitely going toward home plate, the coach then turns his efforts toward helping the next runner rounding second or coming toward third base.

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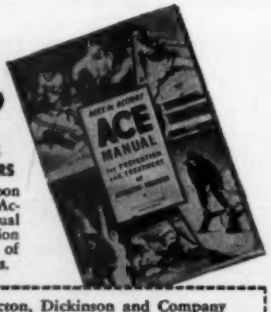

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The third base coach may offer mental help to his baserunner on third by telling him whether to go in to try to score on a ground ball hit to the infield, or to stay at third base. He should also tell the runner when to tag up on a fly ball. He should warn the runner about starting too soon on a line drive to the infielders in order not to be doubled off third base. He must remind the runner of a possible squeeze play or a steal of home. He should remind the runner to be ready for a fast start to score in case of a wild pitch or a passed ball. These mental reminders may all be given in considerably less than one minute, while the pitcher is waiting for his fielders to get set, and for the signal from his catcher.

Chester County Gymnasium

(Continued from page 11)

drawn up and secured, making it possible for two teams to practice at the same time. Also, there is a large curtain which may be drawn in order to separate the gymnasium into two courts.

There are six exits from the gymnasium itself (eight from the whole building). These make the room safe in case of fire or smoke, although the building is fireproof.

Seating Capacity of the Gymnasium

The gymnasium may easily and comfortably seat 2000 people. On the south side of the playing floor is a section of permanent concrete bleachers. These may not be reached from the gymnasium floor, but are accessible only through special entrances and steps on either side of the gymnasium. In addition to these permanent concrete bleachers, there are six sections of roll-a-way bleachers on the floor, on the north and south sides (twelve sections in all). These may be pulled out quickly and used at any time.

Unobstructed View of the Floor

Especially important is the fact that there is no obstruction of the spectator's view of the floor from any of the seats. There are no beams or posts which might interfere. The scoreboard may be seen from practically any position in the room.

The lighting in the gymnasium is very good, since there are sixty-four incandescent lights in addition to

JACK BROWN played football at Temple under Ray Morrison and Josh Cody in 1942, only to have his schooling interrupted by the war. Following the war, he entered Union University at Jackson, Tennessee, graduating in 1949. In addition to his duties as athletic director, Brown coaches football, basketball and baseball.

forty-three windows. At night these give an almost daylight effect. The acoustical arrangements consist of slag block walls.

The building is heated by steam, and, of course, even in extremely cold weather is very comfortable. This is made possible by the thermostatic control of the temperature. Six heating units are suspended from the ceiling, and fans are attached to them. Adequate ventilation is made possible by the forty-three windows and by the fans. The heating units and fans also serve as cooling units.

Steel Gates Cut Off the Gymnasium

An interesting feature of the school building relating to the gymnasium are the steel gates which are drawn from the walls of the front corridor on game nights, thus cutting off the rest of the building from the corridors leading to the gymnasium.

Physical Education Classes

The curtain, previously mentioned, which separates the gymnasium floor into two private courts, is especially convenient, since both the girls' and boys' basketball teams and gymnasium classes meet and practice on the same days.

The dressing rooms and showers are located behind the south end of the gymnasium under the concrete bleachers. These rooms, the girls' and boys' on opposite sides of the gymnasium, are accessible from the west and east corridors, respectively. In the boys' shower room there are 196 lockers and adequate group showers. In the girls' shower room there are 70 lockers, private showers, and group showers.

The wire basket system is used in the physical education classes. Each student participating in physical education has the use of a basket. The baskets are numbered and at the physical education periods are issued to the students. They are identified by numbers and issued from behind a steel wire wall in which they are

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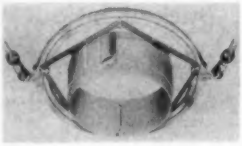
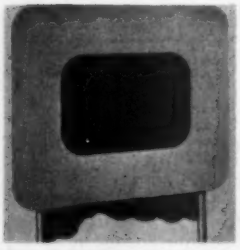
AN important advancement in the ever-constant battle to control athletes foot is this dispenser and sanitary solution being manufactured by Waverly Petroleum Products of Philadelphia, Pennsylvania. The dispenser is a simple treadle mechanism, employing hydraulic pumps activated by the treading motion. The "Sani Mist" solution which is sprayed through the grill opening is soothing, checks athletes foot fungi, and is extremely economical. A gallon provides enough solution for 3100 full strength treatments. The dispenser is rustproof and fully guaranteed.

THE Pond-Medart twisting belt is a real boon for gymnastic coaches and physical education instructors. Its unique construction prevents twisting or fouling of all suspension ropes, regardless of the number of body twists or somersaults. The belt is invaluable for teaching fundamental and advanced stunts in tumbling, flying rings, acrobatic dancing, figure skating, diving, trampolining, to mention a few uses. It consists of two aluminum rings with the inner ring revolving freely on ball bearings. Fred Medart Products, Inc., 3535 DeKalb Street, St. Louis 18.





EVER since our article on flicker ball appeared in the October issue numerous requests for information on flicker ball goals have been received. We are happy to report that Game-Time, Inc., of Litchfield, Michigan is now manufacturing this item. For outdoor use the goal is provided with clamps for quick mounting on vertical posts; for indoor use a variety of clamps permit quick mounting on basketball backstops. Complete rules and instructions on flicker ball will be sent upon request.

THIS is absolutely the latest in basketball player scoreboards having just been installed in the Bradley University fieldhouse. By means of the simple-to-operate control panel instantaneous reporting of field goals, free throws, total points and personal fouls are relayed to the board shown in the background. An added feature of this highly informative board is the fact that a red light automatically flashes when any figure is changed. For information write Merle Eagle, Peoria, Illinois.

THE problem with leather shoes is how to preserve the leather without clogging the pores in such a manner that the leather will no longer breathe. This Riddell Shoe Preserver is the answer, and it is easy to apply either by spraying or simply spreading it on. It saturates and lubricates the fibers of the leather, keeping them flexible. Manufactured by John T. Riddell, Inc., 1259 N. Wood Street, Chicago 22. This useful addition to every equipment room may be secured at sporting goods dealers.

enclosed. In each of the rooms there are 288 baskets.

Adjoining the two basket rooms and the shower rooms are the equipment storage rooms and the offices of the physical education teachers and coaches. On both the boys' and girls' sides there is an elevated caged-in storage space reached by a steel ladder attached to the wall.

Other Uses of the Gymnasium

The gymnasium is used on other occasions rather than those of ball games. For instance, class parties are held there and also parties given by the various clubs. Square dancing is permitted, but only after those participating have removed their shoes and shown themselves willing to do "sockfeet" dancing.

The Freed-Hardeman College, a local church-supported institution, holds its basketball games in the gymnasium. In the future, other activities involving a larger number of people than any other room in the building can accommodate, will take place in the gymnasium.

Concessions

The school cafeteria is located just across the corridor from the gymnasium on its east side. On game nights it serves as a concession stand where the spectators may purchase refreshments and engage in a congenial chat. Chairs and tables are plentiful.

Enrollment of the School

The enrollment at this school is about 420. Each student participates in physical education unless he is excused for some physical disability. Physical education is stressed here and the ball teams are constantly the center of attention not only of the students, but of the townspeople. In this small town of only 2500 inhabitants, and also among the county residents, the high school is always the center of activity.

These people are extremely loyal to the team and to the coaches. The principal, Mr. James Williams, a former teacher, football and basketball coach, is not only competent in heading such an establishment, but his competency is exceeded only by his constant kindness and generosity. He is liked and respected by the student body.

All the residents of Chester County are proud of their new high school, especially the gymnasium, and old and young alike call it *theirs*.

The Television Ban

(Continued from page 18)

is the plight of the litle fellow. The Notre Dames, California's et al., will receive compensation," (as advocated by Mr. Corbett) "but what of the Slippery Rocks and Valley Highs?"

After having hashed over the television problem in these pages for three years and during that time having failed to see any mention of the problem in the other coaching magazines, we began to feel that possibly we were unduly alarmed. We were gratified to see our foremost competitor discuss the situation last May. They felt that television, like radio, would create a large number of new fans. Incidentally, this argument is highly regarded among many who have followed the television question. We sincerely hope such is the case. It did surprise us to see this magazine, which by its very name is dedicated to high school sports, show such an utter disregard for the high schools and small colleges as was indicated when they said: "The only sports events that TV may kill are the mediocre attractions. As far as we're concerned that's justifiable homicide."

It may be that a ban on live telecasts is not the answer, but whatever the answer may be, we of the Athletic Journal promise our readers that we will not sit by and let television of games by a few big universities kill off football and the other sports in the high schools and small colleges. That is for sure.

Coaching Security

JUDGING by recent reports, coaches are primarily interested in the assurance of a long tenure. The coaching profession being what it is, this is really understandable. With due deference to the howling alumni and downtown quarterbacks, some of the reasons for lack of tenure may be traced to the coaches themselves. Numerous college presidents have broken contracts in order to permit the coach to accept a better position. We know of one college president, who when confronted by his coach for a long-time contract, asked the coach whether he would consider the contract binding in the event the coach received a better offer. The coach replied that it didn't work that way in coaching. A contract must be a two-way affair. The coach is entitled to security, and in return the institution should be entitled to assurance that every few years they will not have to hire a new coach.

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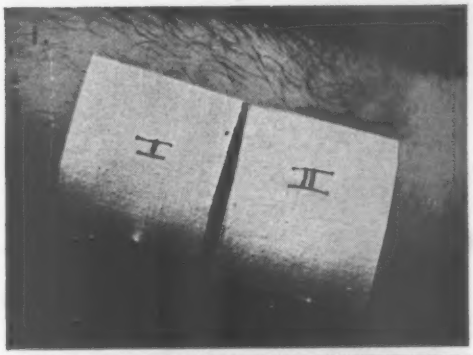

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